# WIN/INFORMED

# UNIVERSE IDENTIFICATION AND
# WASTE ACTIVITY MONITORING
# (UID/WAM)

# PROGRAM SYSTEM ANALYSIS UPDATE

July 16th, 2001

# Acknowledgements

We would like to thank the following individuals for their help with the development of this report:

| | | |
|---|---|---|
| Clyde Buchanan | Bud McCarty | Debbie Goodwin |
| Elizabeth Bols | Les Otte | Michael Hillard |
| Jack Griffith | Dave Levy | Jane Ratcliffe |
| Paula Cantor | Matt Loesel | Caroline Westerfer |
| Dan Kruger | Jessica Ogle | Gregory Fried |

# TABLE OF CONTENTS

THIS PAGE INTENTIONALLY LEFT BLANK

# EXECUTIVE SUMMARY

## Introduction

This document is being distributed to all State environmental agencies and EPA to present the most recent results of the WIN/INFORMED initiative. This document has been sent out in close conjunction with the RCRAInfo Design Team's 'Proposed Design Changes to RCRAInfo to Address the WIN/INFORMED Universe Identification and Waste Activity Monitoring (UID/WAM) Program Area Analysis (PAA) Results' document. This document provides a 'bridge' between the conceptual results of the PAA Report and the specific systematic changes of the Proposed Design Changes.

## *Background*

As part of the WIN/INFORMED initiative, analysis of the Universe Identification (UID) and Waste Activity Monitoring (WAM) program areas was completed in January 2000. The analysis described a number of recommendations for changes to the current RCRA program information management practices, and provided high-level plan to guide the design and implementation of these recommendations.

*You can find a copy of the report that describes the results of this effort, published on the Internet at:* www.epa.gov/epaoswer/hazwaste/data/win/r00-004.pdf

The PAA Report identified four implementation projects based on logical groupings of the recommendations.

### Project 1: ICR Reliant Changes

This project determines the policies/procedures, reporting mechanisms, and information system changes identified by those PAA recommendations that require Federal Information Collection Request (ICR) changes.

### Project 2: Site Verification and TSD Quarterly Reporting

This project groups those recommendations that have the greatest impact to existing regulatory and/or information management practices together with other recommendations that are critically dependent on these.

Site Verification: This has considered the feasibility of alternative mechanisms by which site identification data can be verified and updated by RCRA Sites.

TSDF Quarterly Electronic Reporting: The project will study the feasibility of the quarterly electronic reporting of waste receipt data from the nation's TSDFs.

### Project 3: Data Integration into RCRAInfo

The project determines how the RCRAInfo data and functionality for site identification information will be integrated resulting in one reconciled data management system instead of the previous two overlapping system modules (i.e., the biennial Hazardous Waste Report site identification data and the other RCRAInfo site identification data).

**Project 4: New Guidance**

This project groups the remaining recommendations that either require new guidance to be developed or encompass practices that when implemented will improve the quality of information that is currently inconsistently reported.

## *Current Status of the PAA Implementation Plan*

During the last 18 months, detailed systems analysis has been performed for Projects 1, 2 (for Site Verification only) and 3, and currently the RCRAInfo design team has begun the process of implementing the changes within RCRAInfo based on the results of these projects. They anticipate most of the changes to be implemented by the end of this year.

For project 2, the TSD Quarterly Reporting was considered via a 'feasibility study' in mid-2000, and is now being further developed to support a Notice of Data Acquisition (NODA) that will be released by EPA later this year. This is the first step towards a potential federal regulation.

Project 4 is due to begin imminently and should be completed by the end of the year.

In parallel to these four projects, the WIN/INFORMED team is also considering the changes that can be made to the current RCRAInfo reporting capabilities, so that the system better supports the types of capabilities identified in the PAA report. Although these changes may not be incorporated before the end of the year, it is anticipated that they will be soon thereafter.

**This remainder of this summary presents the results of the three Program Systems Analysis projects that have been completed to date (ICR Reliant Changes, RCRAInfo Data Integration and Site Verification).**

# ICR Reliant Changes

This project considered many of the PAA recommendations, and resulted in a number of changes to federal reporting forms as well as RCRAInfo. This summary describes the most significant changes to both the forms and system respectively.

## *Summary of changes to the Reporting Forms*

The following provides a summary of the major changes that are incorporated in the new forms. Each of these required equivalent modifications to RCRAInfo to support the modifications to the data being collected.

An updated set of 2001 Hazardous Waste Reporting Forms have been developed. A copy of the new forms and instructions can be found on the Internet at: http://www.epa.gov/epaoswer/hazwaste/data/brs01/forms.htm.

**Replacing the Identification and Certification Form (Form IC) with the Site Identification Form.** For the 2001 Hazardous Waste Report, the EPA has replaced the 1999 Form IC with the Site Identification (ID) Form. In the past, basic site information (e.g., information on hazardous waste handling activities taking place at RCRA-regulated sites) was collected on three different forms, each with its own instructions and definitions. This sometimes gave regulators conflicting information about the same site, and was burdensome for respondents.

Specifically, large quantity generators (LQGs) and treatment, storage and disposal facilities (TSDFs) reported site information for the Hazardous Waste Report (EPA Form 8700-13A/B) on the Form IC. Basic site information was also collected from all RCRA-regulated facilities on the Notification of Regulated Waste Activity form (EPA Form 8700-12). Finally, TSDFs seeking a permit or permit renewal submitted site information on the RCRA Hazardous Waste Part A

Permit Application (EPA Form 8700-23). The new Site ID Form standardizes the RCRA site information that was collected on these three forms.

**Clarifying the Types of Hazardous Wastes to be Reported.** The 2001 Hazardous Waste Report instructions clarify that generators should generally report only the hazardous wastes that count toward the determination of their generator status. This includes wastes that are generated, accumulated, and subsequently managed on site or shipped off site. TSDFs should report hazardous waste received from off site, the management of the hazardous waste while on site, and any shipments of hazardous waste off site.

In addition, sites should not report hazardous waste exports as part of their Hazardous Waste Report submission. (Note that primary exporters of hazardous waste are currently required to file an Annual Report on their exports under 40 CFR 262.56.) Importers of hazardous waste must complete a Waste Generation and Management Form (Form GM) and use the appropriate code to identify that the waste was imported from a foreign country.

**Streamlining the Hazardous Waste Report's Source, Origin, Form, and System Type Codes.** The Source codes in the 2001 Hazardous Waste Report have been consolidated, regrouped, and merged with the Origin codes. The new Source codes are now mandatory. Origin codes have been eliminated altogether but for historical trend analysis may be implied by the Source code reported. This new coding scheme reduces the number of codes from 60 to 30 and the number of code groups from seven to six. In addition, the Form codes have been revised and streamlined. The new coding scheme reduces the number of Form codes from 89 to 47 with seven high-level code groups.

Finally, the System Type codes have been replaced with the Management Method codes. This new coding scheme reduces the number of codes from 65 to 28 and the high-level code groups from 14 to four. It also eliminates overlap with Form codes.

**Removing Point of Measurement, Standard Industrial Classification (SIC) Code, and Off-Site Availability Data Elements from the Hazardous Waste Report.** The Point of Measurement data element on the 1999 Form GM consisted of four codes showing whether the waste being reported was mixed with other wastes prior to being measured. We determined that there is no significant need for this information. Additionally, because the Point of Measurement was confusing to respondents, the data were often of questionable quality. Thus, the Point of Measurement was eliminated from Form GM.

In addition, the SIC code was removed from Form GM, since the North American Industry Classification System (NAICS) codes (the replacement for the SIC codes) was added to the Site ID Form. Completion of the NAICS codes on the Site ID Form is mandatory. The Off-site Availability code on the 1999 Form GM showed whether an off-site facility was a commercially available TSDF, or if it was only permitted to accept wastes from firms owned by the same company. The PAA did not find any need for this information; thus, the Off-site Availability code was eliminated from Form GM.

## *Summary of changes to RCRAInfo*

The following provides a summary of the changes that will be made to RCRAInfo that did not necessarily require a change to the reporting forms.

**Collect both State and Federal generator status from States.** The generator status submitted to EPA's RCRAInfo system will for each RCRA Site will now require two values to be provided. One for the generator status as defined by the State regulations, and a second for the equivalent Federally defined generator status.

**Tracking Hazardous Waste Exports.** Having specifically required that export data is not to be reported on the Hazardous Waste Report forms, the data that OECA receives via the annual Export Report forms will be used instead. OECA will be improving their current system so that it provides a complete set of this information.

**Shared Information Needs not in RCRAInfo.** The following information needs were identified during the PAA as being necessary to answer a number of questions that currently cannot be answered via RCRAInfo. The need was not great enough to warrant being included within federal rule, however some organizations stated that they were collecting the information already. These shared needs will be added to RCRAInfo to allow States and EPA to share the data where it is available:

- Dun & Bradstreet Number

- Hazardous Waste Transfer Station

- Number of Employees

**Candidate RCRAInfo Fields to be deleted.** Based on the PAA concept that only Nationally and Shared information needs should be supported by a national system, 67 existing data fields within RCRAInfo were identified as being candidates for removal. By removing data fields that are only of use to a few specific organizations, the complexity of the system will be reduced and should aid in improving data quality for the data fields that have nationally agreed use and meaning. Please refer to on page 13 of the main document for a complete list of those fields.

**EPA's National Report Generation.** In prior years, EPA has attempted to use sophisticated data analysis routines to help it produce its national waste reports in a consistent manner for all data provided by implementers. Due to the variations in the types of data that States collect this has been an imprecise process. In the future, when States report their waste data to EPA, they will identify the specific RCRA Sites and/or waste streams that should be excluded from EPA's national report (via new database fields named 'Include in National Waste Reports').

# RCRAInfo Data Integration

The PAA implementation plan included a Program System Analysis (PSA) project to plan for and design a process by which a single integrated information source of Site Identification data could be provided for the RCRA program (see PAA Report – "*Recommendation 23: Provide an integrated source of RCRA program information*").

**Currently, RCRAInfo has two separate repositories of Site Identification information.** The basic identification data about a RCRA Site is currently maintained redundantly in both the RCRAInfo Handler module (Handler) and the RCRAInfo BRS module (BRS).

**As part of the modifications to RCRAInfo, the site identification data currently held in the Handler and BRS modules is to be merged to form a single repository of such data.** This step will remove many of the problems encountered due to the number of inconsistencies between the content of the current datasets. Once the data integration exercise is complete, the Handler module will become the "master" (and only) record of a RCRA Site's identification information in the future.

In order to determine which of the two current sources should be used to support the integration work, a survey of RCRA implementers (State agencies and EPA Region offices) was conducted to understand their preferences, given their unique and detailed knowledge of the data recorded about the RCRA Sites regulated in their areas of responsibility.

All but a few Implementers responded to this survey and indicated how they felt this data would best be integrated. The majority indicated that they would prefer to disregard the BRS data and solely rely on the Handler data, most of the remainder would prefer the BRS data, and a few indicated that they were translators and so they would manage their data integration internally. A default integration approach was developed based on the majority preferences and will be applied to the data from those Implementers that do not indicate a preference.

**The RCRAInfo design team will develop the data conversion routines to implement the Implementers' data integration preferences by the end of this year**. This will allow the data submitted for the 2001 Hazardous Waste Report to be absorbed within the final integrated set of data.  Ideally, the Design team will allow implementers to review the results of this conversion during the system-testing phase of their project, and allow Implementers to change their preferred option at that point based on their satisfaction with the results of the conversion.

---

*Note: the recent Design Team decisions regarding the restructuring of the Handler module will impact the decisions made by Implementers regarding their integration approach. The Design Team's 'document concept' has resulted in a data structure that will, for example, allow for the location address of a site to be tracked multiple times in correspondence to each document received containing that address. The integration approach described herein assumed that only one location address would be tracked for a Site and so Implementers elected which one of the two sets of that data they would prefer to retain after the integration is complete. They now have the additional option of retaining both.*

*It may be that the general preferences in dicated by Implementers (to either merge the data that came from BRS, or to leave that aside) will still prevail, however, each Implementer will be able to reconsider those elections prior to the final data conversion being performed.*

---

# Site Verification

One of the key PAA recommendations; "*Recommendation 2: Study the feasibility of periodic site verification*", is concerned with improvement of the quality of basic site information held by the RCRA program through regular verification of basic RCRA Site information.

**In summary, this recommendation states that States and EPA need to get more up-to-date basic identification information about the RCRA Sites that they regulate (i.e., their business name, address, contact person, and types of RCRA regulated activities).**  To achieve this, RCRA Sites should periodically review the identification information that each Implementer knows about the Site and identify any changes that have occurred to that information.

**Support for a Federal requirement is inadequate for the present.** Outreach tasks were also conducted to communicate the benefits of the recommendation to States and to the regulated community and to obtain a greater understanding of the costs and benefits associated with its implementation. The outreach tasks were also used to identify barriers to implementation along with an understanding of how to minimize those barriers and maximize benefits for States and the industry.

The results of this outreach highlighted that many Implementers do not have adequate processes in place to assure the quality of this information, and most of them do not have any apparent ways of funding any such new process. The regulated community opinion indicated a resistance to a new federal regulation being employed, but reasonable le vel of acceptance for a voluntary process. Based on both a lack of industry support and apparent funding available, the option of imposing a federal requirement for Site Verification was deemed to be impractical at this time.

**To improve the quality of RCRA Site information in national and State systems, implementing States and EPA Regions are being encouraged to conduct some type of verification process on a regular basis.** Where possible, Implementers should attempt to conduct this verification process at a minimum for all active TSDFs, LQGs, SQGs, and transporters that have previously notified and which have a valid EPA identification number. Response by the RCRA Site would be voluntary unless otherwise required by State regulations.

**Data collected and managed by RCRA Implementers for the 'nationally' required Site Identification information needs should comply with, or exceed a specific level of data quality.** The following national information needs should be included within any verification mechanism:

- EPA identification number

- Site name

- Location address

- Land owner type

- Owner name and type

- Operator name and type

- Site contact name and phone number

- Mailing address

- Industry types

- Regulated Waste Activities (e.g., generator status)

**The verification process should ensure that this information is never more than two years old for TSDFs and LQGs, and five years for SQGs and Transporters.** These data quality goals were agreed by the WIN/INFORMED States and EPA to provide the best return in terms of improved information quality with limited burden increase. However, national reviewers also stressed that each Implementer must have the ability to conduct the process more frequently if desired. The Implementer will determine the best frequency for this process taking into account their resource and other constraints and other reporting requirements.

**Implementers and the regulated community will not be required to implement or respond to the verification requirement.** Although Implementers will be encouraged to conduct the verification process and RCRA Sites will be encouraged to respond, there is not enough current support for a federal regulation and so this process must remain optional. Individual States may elect to mandate the verification requirement if desired and the Implementer may take appropriate follow-up actions at their discretion.

**Implementers must be allowed to apply the core principles of the recommendation using the most appropriate approach.** While this recommendation has resulted in a number of preferred options for the implementation of verification, the practical application of the recommendation by each Implementer must be allowed to vary according to the Implementer's specific needs.

The Site Verification documentation provided in the main section of this report is to be used as a guide for those Implementers that are able to begin a verification process. A variety of alternative approaches and case studies are provided to help the Implementer consider which option works best in their environment.

# INTRODUCTION

## Purpose and Audience

This document is being distributed to all State environmental agencies and EPA to present the most recent results of the WIN/INFORMED initiative. This document has been sent out in close conjunction with the RCRAInfo Design Team's 'Proposed Design Changes to RCRAInfo to Address the WIN/INFORMED Universe Identification and Waste Activity Monitoring (UID/WAM) Program Area Analysis (PAA) Results' document. This document provides a 'bridge' between the conceptual results of the PAA Report and the specific systematic changes of the Proposed Design Changes.

This document should be of interest to both program managers and data administrators. It will provide insights into some of the policy changes that are occurring as well as the likely implications to RCRAInfo and equivalent State information systems.

## Background

As part of the WIN/INFORMED initiative, analysis of the Universe Identification (UID) and Waste Activity Monitoring (WAM) program areas was completed in January 2000. The analysis described a number of recommendations for changes to the current RCRA program information management practices, and provided high-level plan to guide the design and implementation of these recommendations.

*You can find a copy of the report that describes the results of this effort, published on the Internet at:* www.epa.gov/epaoswer/hazwaste/data/win/r00-004.pdf

> *Please note that the PAA Report should be used for reference when reading this document. This document has specifically avoided duplicating the results contained within the PAA document. Much of the background regarding the intent and reasoning behind recommendations referenced in this document can only be found within the PAA Report.*

The PAA Report identified four implementation projects based on logical groupings of the recommendations.

### Project 1: ICR Reliant Changes

This project determines the policies/procedures, reporting mechanisms, and information system changes required by those PAA recommendations that require *only* federal Information Collection Request (ICR) changes.  By grouping these recommendations together, the changes to the reporting forms, data entry screens and regulations can be accomplished in unison, allowing for coordinated ICR changes and ensuring consistent design and implementation.

### Project 2: Site Verification and TSD Quarterly Reporting

This project groups those recommendations that have the greatest impact to existing regulatory and/or information management practices together with other recommendations that are critically dependent on these. These have been segregated from the other recommendations due to their need for further feasibility study and also due to length of time required perform the studies.

Site Verification: This has considered the feasibility of alternative mechanisms by which site identification data can be verified and updated by RCRA Sites. The project will consider the costs and burden that would be imposed upon the regulated community and RCRA implementers for several different types of implementation.

TSDF Quarterly Electronic Reporting: The project will study the feasibility of the quarterly electronic reporting of waste receipt data from the nation's TSDFs. This would include the evaluation and design of the reporting mechanism, a national repository and State/EPA data interchange mechanisms, and the pre-population of generators biennial hazardous waste reports. Extensive outreach to TSDFs will be included to gauge support and burden.

### Project 3: Data Integration into RCRAInfo

The project will determine how the RCRAInfo data and functionality for site identification information will be integrated resulting in one reconciled data management system instead of the previous two overlapping system modules.

### Project 4: New Guidance

This project groups the remaining recommendations that either require new guidance to be developed or encompass practices that when implemented will improve the quality of information that is currently inconsistently reported. The PAA recommendations included within this project are:

- Recommendation #1: Issue guidance on EPA identification number assignment

- Recommendation #3: Track all notifying CESQGs nationally

- Recommendation #4: Track all emergency and temporary sites nationally

- Recommendation #5: Track all non-notifiers nationally

## Current Status of the PAA Implementation Plan

During the last 18 months, detailed systems analysis has been performed for Projects 1, 2 (for Site Verification only) and 3, and currently the RCRAInfo design team has begun the process of implementing the changes within RCRAInfo based on the results of these projects. They anticipate most of the changes to be implemented by the end of this year.

For project 2, the TSD Quarterly Reporting was considered via a 'feasibility study' in mid-2000, and is now being further developed to support a Notice of Data Acquisition (NODA) that will be released by EPA later this year. This is the first step towards a potential federal regulation.

Project 4 is due to begin imminently and should be completed by the end of the year.

In parallel to these four projects, the WIN/INFORMED team is also considering the changes that can be made to the current RCRAInfo reporting capabilities, so that the system better support the types of capabilities identified in the PAA report. Although these changes may not be incorporated before the end of the year, it is anticipated that they will be soon thereafter.

## Document Organization

This remainder of this document presents the results of the three Program Systems Analysis projects that have been completed to date (ICR Reliant Changes, RCRAInfo Data Integration and Site Verification).

These results have been passed on to the RCRAInfo Design team to ensure that the federal system incorporates all of the agreed changes. States with their own data collection forms and/or information systems should also use these results to direct any changes that may be required to those mechanisms.

THIS PAGE INTENTIONALLY LEFT BLANK

# ICR RELIANT CHANGES

## Introduction

This section provides details of the types of changes that will made to the federal reporting forms and the national RCRAInfo system to support the implementation of the ICR reliant recommendations from the Universe Identification / Waste Activity Monitoring Program Area Analysis (PAA) project.

The project team considered each recommendation from the PAA report that required an ICR to modify the data collection forms, and developed a new Site Identification form to replace the existing form using for the biennial Hazardous Waste Report. This same form will also be used to replace the existing Notification and Permit Part A Application (as a partial replacement) forms.

Having developed the new form, the team considered the impacts to RCRAInfo based on the new form and the recommendations that affected the form. The team identified the types of changes that would be required to the database, the data entry screens, the on-line reports and the translator flat files. The changes were generally either related to adding/modifying data fields or removing data fields that the PAA did not identify as National or Shared needs for Implementers and EPA.

---

**The 2001 Hazardous Waste Report Forms**

It is recommended that the reader reference the new Hazardous Waste Reporting forms. A copy of the new forms and instructions can be found on the Internet at:
http://www.epa.gov/epaoswer/hazwaste/data/brs01/forms.htm

---

This section contains a summary of the changes organized by PAA recommendation and/or general types of changes. This is not intended to be precise specifications for system changes, but rather input documents to the RCRAInfo design team that will determine how the changes should best be implemented within the system.

## Revised Site Identification Form

The following PAA Recommendations are considered in this section:

> *7 - Merge common elements of current site identification forms,*
>
> *8 - Add additional Data Elements to Notification Form, and*
>
> *9 - Provide standard notification of handlers of universal wastes*

A new *Site Identification* form has been developed to harmonize the site profile information that is currently collected on the Notification form, the Part A Permit Application, and Hazardous Waste Report Identification and Certification form along with other non-standardized forms (e.g. Notice of Emergency Site, Transporter Application).

Highlights of Changes to the 2001 Hazardous Waste Report

- Replaced the Form IC with the Site ID Form. All sites required to file a 2001 Hazardous Waste Report must submit a Site ID Form as a component of the 2001 Report.

- Clarified that sites generally need only report on Form GM those hazardous wastes that were included in determining their generator status.

- Clarified that sites should not report their hazardous waste exports in their 2001 Hazardous Waste Report submissions. (Primary exporters are already required to submit an Annual Report on their hazardous waste exports under 40 CFR 262.56.)

- Clarified that importers of hazardous waste must submit a Form GM and use the appropriate code to identify that the waste was imported from a foreign country.

- Developed a revised set of Source codes, which are now mandatory on Form GM. Origin codes are no longer reported.

- Developed simplified Form codes.

- Replaced System Type codes with Management Method codes. The new coding scheme eliminates overlap with Form codes and provides a simpler coding structure than System Type codes.

- Eliminated Point of Measurement, SIC code, and Off-site Availability data elements from the Form GM.

## *Basic Site Identification Information*

NAICS code values will be populated using a cross-reference from current SIC code information based on Biennial Report waste stream data. The current SIC codes will be readily accessible through lookup tables. A 'cross-reference' lookup table will include NAICS codes with their corresponding SIC codes.

It was determined that for all TSDFs the SIC codes will be converted directly to NAICS code(s). For non-TSDFs, Implementer's will be given the choice as to which option to choose for conversion. The Implementers can choose to convert all existing SIC codes or only those SIC codes that directly map to one NAICS.

The Mailing Country field is also new to the Site Identification form. The conversion / data entry of this field will be up to each state and will be blank to start with.

The 'Date Change Operator/Owner' field will now read 'Date Became Operator/Owner'. This will help to clarify the meaning of this field, which could previously have been interpreted as the date the operator/owner either 'became' or 'was no longer' affiliated with the RCRA Site. This change of the field name will also be accompanied by a specific change in the definition of the field. It will strictly be the date that the Operator or Owner became the Operator or Owner.

The data collected within the certification block on the Site Identification was determined to be a shared need, and should therefore be optional in the system. The information included consists of the Last Name, First Name, Title, and Date signed on the form. Given that the new form allows for multiple certifications per form, the system will also track multiple entries.

## *Site Activity Information*

In general, activity fields in RCRAInfo are populated with either an "X" or blank to indicate if the submitter (e.g., the RCRA Site or an inspector) ticked the box on the form or not. Given that the current structure of the database contains records for these fields for all historical data, the team has concluded that this could be better tracked as three values (meaning: 'yes', 'no', and 'unknown'). When a new activity field is added to the database it will be defaulted to 'unknown' for all current records. This will allow historical data to better reflect that, for example, the Importer Activity was unknown for all prior collections of site activity data, and not risk users misinterpreting a blank entry as a 'No' – which was not what was reported at that time.  The Design Team will determine how 'Unknown' will be designed for the system.

During the review of the activity fields, the initiative was taken to try to make the format of those fields more consistent. Specifically, some fields that allowed two independent indicators to be tracked (by providing values for one, the other or both) were converted into two separate fields. For example, Used Oil Transporter and Used Oil Transfer Station are now two separate fields, whereas they used to be one. The Design team should ensure that the format of all of the yes/no type of fields are consistently formatted so that a user of the data can rely on the values for one field will be consistent with those of another such field.

The new Mixed Radioactive Waste Generator activity flag will be pre-populated based on whether there were any WR forms during the 1999 cycle that showed that mixed radioactive waste was sent to a TSDF from that generator.  (Based on the RAD_MIX flag in the BR1 Basic Form WR Info table – by converting all 'Y's and '1's into 'Y').

An Importer Activity flag will be added and will be initially populated with 'unknown'.

A Destination Facility for UW flag will be added and will be initially populated with 'unknown'.

A new table will be added to capture details of the universal waste handling activities. This data is captured on the Site Identification form in the fields named Large Quantity Handler of Universal Waste. The new table will include three fields; UW Type, Generated Indicator, Accumulated Indicator.

*The following table cross-references the final set of form fields to the existing RCRAInfo fields (note, other redundant activity fields that should be removed are described in subsequent section of this document).  The System Change and Data Conversion Required summarize the change needed to support the activity form fields.*

| Site Id. Form Field | Existing RCRAInfo Hactivity Field | System change required | Data conversion required |
|---|---|---|---|
| 10:A:1:A-C:Generator of Haz Waste/Status | fk lu generatorgenerator activ | Use current for Federal Status, and create new foreign keys for State Status. | Use 1, 2, 3, or N for Federal Status. And for State Status, States must define their own. |
| 10:A:1:D:Importer? | None | Add a new Yes/No flag | Default to 'unknown' |
| 10:A:1:E:Mixed Waste Generator? | None | Add a new Yes/No flag. | Default to 'unknown' |
| 10:A:2:Transporter? | Transporter Activity | Make field a Yes/No flag. | If 'C' or 'S' or 'X', set to 1 (yes) |
| 10:A:3:Treater, Storer or Disposer? | Tsd Activity | Make field a Yes/No flag. | If 'X', set to 1 (yes) |
| 10:A:4: Recycler? | Recycler Activity | Make field a Yes/No flag. | If 'C' or 'R', set to 1 (yes) |
| 10:A:5:A:Exempt Boiler/ Furnace - SQ Burner | None | Add a new Yes/No flag | Default to 'unknown' |
| 10:A:5:B:Exempt Boiler Furnace - Smelting, melting, refining Furnace | None | Add a new Yes/No flag | Default to 'unknown' |
| 10:A:6:Underground Injection Control | Underground Injection Activity | Make field a Yes/No flag. | If 'X', set to 1 (yes) |
| 10:B:1:A-G:LQH which waste generated and/or accumulated | Universal Activity | Add a new table for 'UWactivity' related to the Hactivity table. Include three fields: UW Type, Generated Indicator, Accumulated Indicator. | Not possible, But very little data anyway. Default to 'unknown'. |
| 10:B:2:Destination Facility for UW | | Add a new Yes/No flag | Default to 'unknown' |
| 10:C:1:Used Oil Transporter | Used Oil Transporter | Make field a Yes/No flag. | If 'T' or 'B', set to 1 (yes) |
| 10:C:1:Used Oil Transfer Facility | Used Oil Transporter | Add a new Yes/No flag | If 'F' or 'B', set to 1 (yes) |
| 10:C:2:Used Oil Processor | Used Oil Processor Refiner | Make field a Yes/No flag. | If 'P' or 'B', set to 1 (yes) |
| 10:C:2:Used Oil Refiner | Used Oil Processor Refiner | Add a new Yes/No flag. | If 'R' or 'B', set to 1 (yes) |
| 10:C:3:Off-spec Used Oil Burner | Used Oil Burner | Make field a Yes/No flag. | If 'X', set to 1 (yes) |
| 10:C:4:A-B:Marketer who Directs shipments | Used Oil Market Burner | Make field a Yes/No flag. | If 'X', set to 1 (yes) |
| 10:C:4:A-B:Marketer who Claims oil | Used Oil Spec Marketer | Make field a Yes/No flag. | If 'X', set to 1 (yes) |

## *PAA Recommendation: 6 - Collect both State and Federal generator status from States*

States will report their State Generator Status as identified by their own regulatory definitions and will also report the generator universe as identified by the Federal regulatory definition based on the best of their ability to determine it. For many States this will be the same data, but for States that are either more stringent than, or broader in scope than the federal regulations, these values may differ for some of their RCRA Sites.

Every RCRA Site will have two generator statuses in the system, the Federally defined and the State defined status.

- The State Generator Status is user defined and may contain values specific to that state.  An example of the values may be MQG for Medium Quantity Generator. The look up description fields will include text written by the owning State summarizing the meaning of that status. This should be available for reference from within any data inquiry system. The best Federal equivalent (i.e., LQG, SQG or CESQG) will also be referred to in this look up description of the State defined value.

- The Federal Generator Status should be determined by the State either using information collected directly from the regulated community or by extrapolation from waste generation information provided on the Biennial Reporting forms or equivalents when it becomes available.  At a minimum, the required reporting frequency for the status of LQGs and TSDFs is biennial.

# Revised GM / WR Forms

## *PAA Recommendation: 15 - Clarify Types of Hazardous Wastes to be reported*

The Biennial Reporting form requirements should be changed such that generators only report those hazardous wastes used in the determination of their generator status.  Further, the Biennial Reporting form instructions should be changed to clearly identify the wastes that are to be used in making the status determination and associated recommended hazardous waste reporting.  No changes will be made to existing data held in RCRAInfo

## *PAA Recommendation: 16 - Streamline Source, Origin Form, and Management Codes*

The following three recommendations will be implemented to streamline and improve the usefulness of reported waste information:

The current source codes will be consolidated, regrouped and merged with the origin codes to provide a simpler coding structure.  It is intended that this approach will provide more meaningful and consistent responses, reduce at least some of the reporting burden, and support the high-level information categorization needs of the PAA participants. This scheme would reduce the number of choices from 60 to 30 and the groups from 7 to 5.  The PAA participants feel that this proposal will result in increased data accuracy and quality through reduced variation in response.

Form codes will be revised resulting in a reduction from 89 to 32 codes. .  The improvement reduces the number of form codes from 89 to 32 with 6 high level groups. This improvement will

result in increased data accuracy and quality through reduced variation in response with a notable decrease in burden for both the handlers as well as program implementers.

The existing management method coding structure will be revised to eliminate overlap with form codes. This coding structure is based in part on analysis of the frequency and perceived accuracy with which different management method codes were reported in the 1995 BRS data. The impact of the LDR treatment codes was also considered in establishing this list. This reduces the detailed list from 65 entries to 28 and the high-level groups from 14 to 4. This proposal will result in increased data accuracy and quality through reduced variation in response with a notable decrease in burden for both the handlers as well as program implementers.

The origin code will be removed (archived) from the database and translator file formats. For historical trend analysis the origin code may be implied by the new Source code reported.

The current source codes will be consolidated, regrouped and merged with the origin codes to provide a simpler coding structure. The new codes will be added to the existing source codes so that past data that referred to the old codes can still be accessed. Only the new codes will be allowed for all future data submissions.

Form and management codes will be revised in a similar manner.

## PAA Recommendation: 17 - Removal of Data Elements from Biennial Reporting forms

A number of fields currently collected on the Biennial Reporting are no longer required and will be removed form the reporting forms and national systems.

The RCRAInfo system fields corresponding to those to be removed from the reporting forms will be "archived". This requires that the field be removed from the data entry, removed from the translation files and load routines, and that the database field be relocated in an equivalent 'archive' version of its parent table.

Since the "point of measurement" data element appears to meet no current information need, it will be removed from the current GM data collection forms and from the associated national information systems. Removal of this element will reduce burden for both the generators and the implementers who have to explain its use.

Remove the SIC code form element from the Biennial Reporting GM form. Supplying SIC data on the GM form is currently optional. However, the collection of the NAICS data through the Notification form will be mandatory and will improve the quality and confidence in the data.

Remove the off-site availability form element from the Biennial Reporting forms and from associated data systems, since this information is derivable from TSDF submitted data.

In summary, the following fields will be archived:

| Current RCRAInfo Table | Field |
|---|---|
| Bg1 form gm basic information | Wst Origin |
| Bg1 form gm basic information | Pt Measure |
| Bg1 form gm basic information | Sic Code |
| Bg5 form gm offsite shipments | Offsite Avail |

## PAA Recommendation: 25 - Make source of waste a national data element

The source of hazardous waste will be made a national data element. This data element will be collected from the generator and may be reported at the individual process level, at the manifest

shipment level or at the cumulative waste code level (within the reporting cycle). The implementing agency will provide the source code to the national information system at the greatest level of detail feasible within the parameters of their individual authorized programs.

Make source code mandatory on all translator submissions and require only valid codes to be submitted into RCRAInfo.

## *PAA Recommendation: 14 - Tracking Imports of Hazardous Wastes*

A reporting mechanism will be added to the Notification form to capture the activity of importing hazardous waste. Adding this information on the Notification form would not exclude the reporting of additional site activities (e.g., hazardous waste transporter).

The Team further proposes that the TSDF continue to report the EPA identification number of the importer as the "generator" of the waste, but also report the country of origin if other than the United States as indicated on the manifest.

Collecting the country of origin will permit implementers to derive that the waste reported by the TSDF was imported into the country.  For example: X quantity of waste was received at TSDF Y from agent Z.  The fact that agent Z imported the waste can be derived by the country of origin for the waste and the activity of "Hazardous Waste Importer" on the agent's Notification form. Implementing this suggestion will permit authorized programs to examine waste generation in greater detail, with an understanding of the true origin of the imported wastes.

An Importer Activity flag will be added to RCRAInfo.

Since collecting the country of origin will permit implementers to derive that the waste reported by the TSDF was imported into the country, the 'Country of Origin' field will be added to the form in the 2003 version.  For example: X quantity of waste was received at TSDF Y from agent Z.  The fact that agent Z imported the waste can be derived by the country of origin for the waste and the activity of "Hazardous Waste Importer" on the agent's Notification form. Implementing this suggestion will permit authorized programs to examine waste generation in greater detail, with an understanding of the true origin of the imported wastes.

Since a new 'Country of Origin' field will capture country of origin data, sites with foreign location addresses will not be allowed in the system.  Any records for sites located out of the US will be removed from the RCRAInfo database (if this was not already performed during the recent conversion).

# **Other RCRAInfo System Changes**

## *PAA Recommendation: 13 - Tracking Hazardous Waste Exports*

Export data from the OECA HWES system will be integrated into the national RCRA program information systems.   This option presents an improvement with potentially no burden increase to the regulated communities or implementing agencies.  Additionally it will provide a mechanism for implementers to communicate with their foreign counterpart, to facilitate tracking of wastes from cradle to grave.

Import HWES data (based on the annual export report) into national RCRAInfo systems every biennium. An additional field to record the Destination Country will need to be added to RCRAInfo.

There are several key problems that relate to HWES:

- The system does not track the Source Code, a national need

- The system does not track the density of volumetric waste reported, thus making summations of weight inaccurate.

- The system allows for many Waste Codes, but the input for that data when very many are reported has been limited to the term 'Many'

(Note: The management method is 'national' but will be an optional data element for export data.)

These problems should be resolved by OECA, partially via the next ICR round for the Export Report.

## *PAA Recommendation: 21 - Determine location coordinates for a RCRA Site*

The RCRA Site will be defined locationally by a specific location address. If this is not available the site may be defined by a description, or by geographic coordinates. Additionally, the specific point used to locate the RCRA Site will be specified, for example, the map point of the address or the site centroid.

Locational data will be tracked for all RCRA Sites. RCRAInfo will include automatic address-matching functionality to facilitate data entry by EPA and States. Implementers would be free to use other methods, e.g., GPS to obtain locational data. Provide implementers the option to record locational data at the unit level. Add data fields in keeping with EPA's locational data standard for method, accuracy, description (MAD) meta-data. Eliminate latitude and longitude data collection from the Part A Permit Application.

The team discussed whether to keep the existing latitude and longitude data in the system. It was determined to give the implementer the choice between three different options. The first option for the implementers is to keep the existing data (in which case the 'source' must be specified). The second option is to use address-matching software (use default for blank lat/long). The third option would be to populate it from EPA's other sources.

Data that is blank will be converted to 'Unknown'. This will be the default from now on. Consequently, the data will not be changed from 'Unknown' until the implementers provide it. This will hopefully erase some confusion for new/old sites without data.

| *Hlatitude longitude SOURCE field value* | *# in system* | *Description* | *Proposed Mapping to Horizontal Collection Method* |
|---|---|---|---|
| A | 64668 | Submitted by the handler | UNKN (*Unknown*). |
| I | 12443 | Latitude/longitude interpolation | IOTH (*Interpolation-Other*) |
| V | 5950 | Verified | UNKN (*Unknown*). |
| Z | 27939 | Zip Code Centroid | ZIPC (*ZIP Code-Centroid*). |
| <blank> | 4019 | | UNKN (*Unknown*). |

## *PAA Recommendation: 26 - Record Source of RCRA Site Activity Information*

Track the source of each new set of information regarding the RCRA regulated activities of a Site. The existing division of EPA Inspection and State Inspection as different sources of Handler

Activity data will be consolidated into one source termed 'Implementer determined'. The existing values for Part A, Notification, and Biennial Report will remain the same.

## Shared Information Needs not in RCRAInfo

The following information needs were identified during the PAA as being necessary to answer a number of questions that currently cannot be answered via RCRAInfo. The need was not great enough to warrant being included within federal rule, however some organizations stated that they were collecting the information already. These shared needs may be added to RCRAInfo to allow States and EPA to share the data where it is available:

> Dun & Bradstreet Number
>
> Hazardous Waste Transfer Station
>
> Number of Employees

The field 'Number of Employees' should be a number field and it should be a specific number rather than a range and should represent number of employees at the Site, not across the nation for the company.

## Candidate RCRAInfo Fields to be deleted

An important goal of the WIN/INFORMED initiative is to identify information that must be collected and made available to all program staff to support the implementation of the RCRA program. Many of the concerns expressed by PAA participants with respect to current RCRA program information can be attributed to varying interpretations of the information and poor current data quality.

RCRAInfo will support the tracking of both "national" and "shared" information needs (see the table below for their definitions).  This will enable implementers that do not have their own information systems to track and share all important information with other RCRA program staff whether that information is needed by the entire program or a smaller subset of the implementer community.  However, existing data fields in RCRAInfo that represent neither national or shared are good candidates for removal.

| NATIONAL INFORMATION | SHARED INFORMATION |
|---|---|
| Has a common, precise definition (i.e., always means the same thing) | |
| Has *mandatory* creation or collection | Is *optionally* created or collected |
| Is maintained to a specified level of quality and currency | May be collected in many different ways and is not always current or fully qualified |
| Relies on Federal rule to support the authority for its collection | Does not depend on Federal authority for its collection |
| Is always accessible to all regulators from national data systems | Is only submitted to national data systems at the discretion of the implementer. |

Reducing the number of fields that are never, or very infrequently used, will reduce the complexity of the system for all users, and enable implementers to focus their data quality efforts of those fields that are to be shared nationally.

The PAA's approach to achieve this was to start from the ground up, i.e., identify what data is really of use and shareable by at least more than one organization. This process used the concept of 'key questions' to help determine what pieces of data were needed to answer those. Obviously, this approach wouldn't be perfect (some less important questions could have been missed), but would help identify the data that was clearly needed.

The data elements that did not come up were assumed to be unnecessary in a national system, given that no one (or too few) people would really use that data (and certainly not benefit by sharing it with other organizations). The concept is that if any individual organization has needs for such data, their technology should adequate (in the current computing environment) for even the least technically capable organization to maintain their organizational specific data within their own systems, potentially even with direct links to RCRAInfo's source data if they so wish.

The following table lists the current system fields that do not map to any national or shared information needs that were identified during the PAA, and provides definitions for those fields where available. These fields will be "archived".

| RCRAInfo Table | Field | Definition (where available) |
| --- | --- | --- |
| Hcontact | Contact title | *Title of the person who is familiar with the handler's operation and the information provided to the authorizing agency.* |
| Hhandler | River Basin | *U.S. Geological Survey (USGS) code identifying the river basin in which the facility is located.* |
| Howner operator | Phone | *Telephone number associated with the owner or operator specified..* |
| Hsic | Primary Sic Indicator | *Indicates the location of the agency regulating the handler.* |
| Hsic | Sic Source | *Code indicating whether the SIC Code was reported by the facility or determined at a later date by the authorizing agency.* |
| Hactivty | Air | *Flag indicating that the handler transports hazardous waste via air.* |
| Hactivty | Rail | *Flag indicating that the handler transports hazardous waste via rail.* |
| Hactivty | Highway | *Flag indicating that the handler transports hazardous waste via road..* |
| Hactivty | Water | *Flag indicating that the handler transports hazardous waste via water.* |
| Hactivty | Other Mode | *Flag indicating that the handler transports hazardous waste via some method other than air, rail, road, or water.* |
| Hactivity | Generator RCRA Desc | *Description which expands on the RCRA Generator Regulatory Status.* |
| Hactivity | Generator RCRA Status | *Code indicating whether a generator is regulated under a state authority which is more stringent or broader in scope than the federal RCRA program.* |
| Hactivity | Generator State Desc | *Description which expands on the State Generator Regulatory Status.* |
| Hactivity | Generator State Status | *Code indicating whether a generator is regulated under a state authority which is more stringent or broader in scope than the federal RCRA program.* |
| Hactivity | Transporter State Status | *Code indicating whether a transporter is regulated under a state authority which is more stringent or broader in* |

| RCRAInfo Table | Field | Definition (where available) |
|---|---|---|
| | | *scope than the federal RCRA program.* |
| Hactivity | Transporter RCRA Desc | *Code detailing the reason that a transporter is not subject to the controls under the federal RCRA program or is subject to such controls on a periodic basis. A separate data element (TRANSPORTER_STATE_DESC) is available for reasons the handler is exempt, excluded, or either conditionally or not subject to State regulations.* |
| Hactivity | Transporter State Desc | *Description which expands on the State Transporter Regulatory Status.* |
| Hactivity | Tsd RCRA Status | *Code indicating whether a facility is regulated under the authority of the federal RCRA program.* |
| Hactivity | Tsd State Status | *Code indicating whether a facility is regulated under a state authority which is more stringent or broader in scope than the federal RCRA program.* |
| Hactivity | Tsd State Desc | *Description which expands on the State TSD Regulatory Status.* |
| Hactivity | Tsd RCRA Desc | *Description which expands on the State TSD Regulatory Status.* |
| Hactivity | Used Oil Recycler Activity | *Code indicating that the handler is engaged in used oil recycling activities.* |
| Hactivity | Used Oil State Status | *Code indicating whether the used oil recycler is regulated under a State authority which is more stringent or broader in scope than the Federal RCRA program.* |
| Hactivity | Used Oil State Desc | *Description which expands on the State Used Oil Recycler Regulatory Status.* |
| Hactivity | Used Oil Utility Boiler | *Code indicating that the handler is a burner using a utility boiler.* |
| Hactivity | Used Oil Industrial Boiler | *Code indicating that the handler is a burner using an industrial boiler.* |
| Hactivity | Used Oil Industrial Furnace | *Code indicating that the handler is a burner using an industrial furnace.* |
| Hactivity | Used Oil Collection Site | *Code indicating that the handler is a Used Oil Collection Center or Aggregation Point.* |
| Hactivity | Hwfuel Activity | *No definition available.* |
| Hactivity | Hwfuel RCRA Status | *No definition available.* |
| Hactivity | Hwfuel State Status | *No definition available.* |
| Hactivity | Hwfuel State Desc | *No definition available.* |
| Hactivity | Hwfuel Market Burner | *Code indicating that the handler is a generator engaged in marketing to burners of hazardous waste fuel activities.* |
| Hactivity | Hwfuel Other Marketer | *No definition available.* |

| RCRAInfo Table | Field | Definition (where available) |
|---|---|---|
| Hactivity | Hwfuel Marketer | *No definition available.* |
| Hactivity | Hwfuel Utility Boiler | *No definition available.* |
| Hactivity | Hwfuel Burner | *No definition available.* |
| Hactivity | Hwfuel Industrial Boiler | *No definition available.* |
| Hactivity | Universal Waste Activity | *Code indicating that the handler is engaged in the storing, transporting, or collecting of universal wastes regulated under the Resource Conservation and Recovery Act (RCRA).* |
| Hactivity | Universal State Status | *Code indicating that the handler is engaged in the storing, transporting, or collecting of universal wastes regulated under a State authority which is more stringent or broader in scope than the Federal RCRA program.* |
| Hactivity | Universal State Desc | *Code detailing the reason that a universal waste handler is not subject to the controls under the federal RCRA program or is subject to such controls on a periodic basis.* |
| Hactivity | Universal RCRA Status | *Code indicating whether a universal waste handler is regulated under the authority of the federal RCRA program.* |
| Hactivity | Universal RCRA Desc | *Code detailing the reason that a universal waste handler is not subject to the controls under the federal RCRA program or is subject to such controls on a periodic basis.* |
| Bs123 form ic part 1 | Source Reduction10 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit1 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit2 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit3 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit4 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit5 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit6 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit7 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit8 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit9 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit10 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit11 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit12 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit13 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit14 | *1 Character fields with no definitions - y or n* |
| Bs123 form ic part 1 | Recycling Limit15 | *1 Character fields with no definitions - y or n* |

**NOTE: EPA will need to reconcile the statute, the rule, and the need to remove the requirement in the Hazardous Waste Report to report source reduction data.**

## EPA's National Report Generation

Waste generation and management information reported on the biennial Hazardous Waste Report forms is used to produce a *National Report* that summarizes generation, management, shipment

and receipt volumes for the nation.  It is necessary to distinguish waste that is counted for the national report, and waste that is not counted for the report.

The team has recommended a flag be added at the 'waste stream' level, and the facility level. This will separate the waste to be used in the National Review from state only waste.   The default will be to include the site/waste in the national report. This will also put the responsibility on the implementer and not EPA to determine what should be excluded.  This flagswill be referenced as 'Include in National Waste Reports'.

# Appendix: 2001 Hazardous Waste Report Code Lists with Enhanced Descriptions.

When the team developed the new list of codes to be used in the Hazardous Waste Report, they recognized that one of the most common technical assistance requested by reporters is regarding which code to use. Most Implementers have developed their own training materials, but to avoid the duplicative effort, the team decided to provide some more detailed descriptions for these codes to assist the Implementers. Following are enhanced descriptions for each of the 2001 Hazardous Waste Report Source, Form and Management Codes.

For all code lists it is most important to choose codes by looking first at the category and second at the actual code description. The codes are hierarchical with the relevance of the code characters decreasing in importance form left to right.

## *Table 1. Source Codes*

| Code | Source of Generation | Old Code(s) |
|------|----------------------|-------------|
| **Wastes directly from ongoing production and service processes -on-going waste from general day-to-day manufacturing or maintenance activities.** | | |
| G01 | Dip, flush or spray rinsing (using solvents to clean or prepare parts or assemblies for further processing - i.e. painting or assembly) | A04, A05, A06, A31 |
| G02 | Stripping and acid or caustic cleaning (using caustics to remove coatings or layers from parts or assemblies) | A01, A02, A03 |
| G03 | Plating and phosphating (electro- or non-electroplating or phosphating) | A22, A23, A24 |
| G04 | Etching (using caustics or other methods to remove layers or partial layers) | A27 |
| G05 | Metal forming and treatment (pickling, heat treating, punching, bending, annealing, grinding, hardening, etc.) | A25, A26,A40 |
| G06 | Painting and coating (manufacturing, building, or maintenance) | A21, A29 |
| G07 | Product and by-product processing (direct flow of wastes from Chemical manufacturing or processing, etc.) | A32,A35, A41, A49 |
| G08 | Removal of spent process liquids or catalysts(bulk removal of wastes from Chemical manufacturing or processing, etc.) | A36, A37 |
| G09 | Other production or service-related processes(where the waste is a direct outflow or result - specify in comments) | A49, A29, A07, A08, A19 |
| **Other Intermittent events or processes** | | |

| G11 | Discarding off-specification or out-of-date chemicals or products (Unused product - corresponds to U and P listed wastes) | A57, A58 |
|---|---|---|
| G12 | Lagoon or sediment dragout and residuals collection (large scale operations in open pits or ponds) | NEW |
| G13 | Cleaning out process equipment (periodic sludge or residual removal from enclosed processes including internal scrubbing or cleaning) | A09 |
| G14 | Removal of tank sludge, sediments or slag(periodic sludge or residual removal from storage tanks including internal scrubbing or cleaning) | A38, A39, A60 |
| G15 | Process equipment change-out or discontinue use of equipment (final materials and residuals removal including cleaning) | A56 |
| G16 | Oil changes and filter or battery replacement (automotive, etc) | A54, A55 |
| G19 | Other one-time or intermittent processes (specify in comments) | A59, A60, A91 |
| **Pollution control and waste management process residuals** | | |
| G21 | Air pollution control devices (baghouse dust, etc from stack scrubbers, vapor collection, precipitation, etc.) | A78 |
| G22 | Laboratory analytical wastes (used chemicals from laboratory operations) | A94 |
| G23 | Wastewater treatment (sludge, filter cake, etc including wastes from treatment before POTW, NPDES or UIC disposal) | A75 |
| G24 | Solvent or product distillation or recovery (sludge, waste solvent, bottoms, from recovery/recycling of used product) | A33, A34, A73 |
| G25 | Hazardous waste management - indicate management method (residuals from regulated HW treatment processes - show the H code) | A71-A74, A76, A77, A89 |
| G26 | Leachate collection.( From landfill operations) | A79 |
| **Spills and accidental releases** | | |
| G31 | Accidental contamination of products, materials or containers (indicates questionable management practices) | NEW |
| G32 | Cleanup of spill residues(indicates questionable management practices) | A53 |
| G33 | Leak collection and floor sweeping (generally on-going) | A51, A92 |

| G39 | Other cleanup of current contamination(specify in comments) | NEW |
|-----|-------------------------------------------------------------|-----|
| **Remediation of past contamination** | | |
| G41 | Closure of hazardous waste management unit under RCRA | A64 |
| G42 | Corrective action at a solid waste management unit under RCRA | A63 |
| G43 | Remedial action or emergency response under Superfund | A61, A62 |
| G44 | State-program or voluntary cleanup | A93, NEW |
| G45 | Underground storage tank cleanup | A65 |
| G49 | Other remediation(specify in comments) | A69 |
| **Waste not physically generated on-site** | | |
| G61 | Hazardous waste received from off-site for storage/bulking and transfer off-site for treatment or disposal. (to match H141 received waste from form(s) WR off-site | A89,NEW (Origin = 4) |
| G62 | Hazardous waste received from a foreign country,(not a foreign DOD site, Malquiladora, US territory or protectorate) This site was the generator of record. (This site is a designated waste importer ID) off-site | NEW |

## *Table 2: Management Method Codes (Ultimate management method at this site)*

| Code | Waste handling method | Old Code(s) |
|------|-----------------------|-------------|
| | **Reclamation and recovery** | |
| H010 | Metals recovery including retorting, smelting, chemical, etc. | M011-M019 |
| H020 | Solvents recovery (distillation, extraction, etc) | M021-M029, M104 |
| H039 | Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.(specify in comments) | M031-M039 |
| H050 | Energy recovery at this site - use as fuel (includes on-site fuel blending before energy recovery - report both as one H050 method) | M051-M059 |
| H061 | Fuel blending prior to energy recovery at another site. (generated at this site or received from off site) | M061 |

| | **Destruction or Treatment prior to disposal at another site** | |
|---|---|---|
| H040 | Incineration - thermal destruction other than use as a fuel (includes any preparation prior to burning) | M041-49 |
| H071 | Chemical reduction with or without precipitation (includes any preparation or final processes for consolidation of residuals) | M071 |
| H073 | Cyanide destruction with or without precipitation (includes any preparation or final processes for consolidation of residuals) | M073 |
| H075 | Chemical oxidation (includes any preparation or final processes for consolidation of residuals) | M075 |
| H076 | Wet air oxidation (includes any preparation or final processes for consolidation of residuals) | M076, M084, M093 |
| H077 | Other chemical precipitation with or without pre-treatment (includes processes for consolidation of residuals) | M072, M074, M077 |
| H081 | Biological treatment with or without precipitation (includes any preparation or final processes for consolidation of residuals) | M081, M091 |
| H082 | Adsorption (as the major component of treatment) | M082, M092, M103 |
| H083 | Air or steam stripping (as the major component of treatment) | M083 |
| H101 | Sludge treatment and/or dewatering (as the major component of treatment - not H071-H083) | M101, M102, M109 |
| H103 | Absorption (as the major component of treatment) | M103 |
| H111 | Stabilization or chemical fixation prior to disposal at another site. (as the major component of treatment - not H071-H083) | M111 |
| H112 | Macro-encapsulation prior to disposal at another site. (as the major component of treatment - not H071-H083) | M112, NEW |
| H121 | Neutralization only (no other treatment) | M121 |
| H122 | Evaporation (as the major component of treatment - not H071-H083) | M122 |
| H123 | Settling or clarification (as the major component of treatment - not H071-H083) | M123 |
| H124 | Phase separation (as the major component of treatment - not H071-H083) | M124 |
| | | |

| H129 | Other treatment (specify in comments - not H071-H124) | M078, M079, M085, M089, M094, M089, M099, M119, M125, M129 |
|---|---|---|
| **Disposal** | | |
| H131 | Land treatment or application (to include any on-site or off-site treatment and/or stabilization prior to disposal on-site) | M131 |
| H132 | Landfill or surface impoundment that will be closed as a landfill (to include on-site or off-site treatment and/or stabilization) | M132, M133 |
| H134 | Deepwell or underground injection (with or without treatment - this waste is counted as a hazardous waste) | M134 |
| H135 | Discharge to sewer/POTW or NPDES (with prior storage regulated by RCRA - not necessarily permit required - with or without treatment) | M135, M136 |
| **Storage and Transfer** | | |
| H141 | Storage, bulking, and/or transfer off-site - no treatment(H040-H129), fuel blending(H061), or disposal(H131-H135) at this-site (only used on form WR and the off-site shipments section of Form GM - linked to source code G61on form GM.) | M141 |

## Table 3: Form Codes

| Code | Form Group | Old Code |
|---|---|---|
| **Mixed Media/ Debris / Devices -** Waste that is a mixture of organic and inorganic or liquid and solid wastes or devices are not easily categorizable. | | |
| W001 | Lab packs with no acute hazardous waste (from any source) | B001, B003,B009 |
| W004 | Lab packs containing acute hazardous waste (from any source) | B004 |
| W301 | Contaminated soil (usually from remediation, demolition, or cleaning) | B301,B302, |
| W309 | Batteries, battery parts, cores, casings (lead-acid or otherwise) | B309 |
| W310 | Filters, solid adsorbents, ion exchange resins and spent carbon (usually from remediation, production, or intermittent processes) | B310,B404 |

| W320 | Electrical devices (lamps, thermostats, CRTs, fluorescents, etc usually Mercury or lead containing) | NEW |
|------|------|------|
| W512 | Sediment or lagoon dragout, drilling or other muds (i.e. wet and muddy W301 soils) | B512,B513, B514 |
| W801 | Compressed gases (any type) | B701,B801 |
| **Inorganic liquids -** Waste that is primarily inorganic and highly fluid (e.g., aqueous), with low suspended inorganic solids and low organic content | | |
| W101 | Very dilute aqueous waste containing more than 99% water (Land Ban defined wastewater, not exempted via NPDES/POTW) | B101,B102, B114,B116 |
| W103 | Spent concentrated acid (5% or more acid) | B103,B104 |
| W105 | Acidic aqueous wastes less than 5% acid (diluted but pH <2) | B105 |
| W107 | Aqueous waste containing cyanides (generally Caustic) | B107,B108 |
| W110 | Caustic aqueous waste without cyanides( pH >12.5) | B106,B109, B110 |
| W113 | Other aqueous waste or waste waters (fluid, not sludgy) | B111,B112, B113,B115 B115,B116 |
| W117 | Waste liquid mercury (metallic) | B117 |
| W119 | Other inorganic liquid (specify in comments) | B119 |
| **Organic liquids -** Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content | | |
| W200 | Still bottoms in liquid form.(fluid, not sludgy) | B601,B602, NEW |
| W202 | Concentrated halogenated (i.e. chlorinated) solvent | B202 |
| W203 | Concentrated non-halogenated (i.e. chlorinated) solvent | B203 |
| W204 | Concentrated halogenated/ non-halogenated solvent mixture | B204,B201 |
| W205 | Oil-water emulsion or mixture (fluid, not sludgy) | B205 |
| W206 | Waste oil | B206 |
| W209 | Paint, ink, lacquer, or varnish (fluid, not dry or sludgy) | B209 |
| W210 | Reactive or polymerizable organic liquids and adhesives(fluid, not sludgy) | B210,B212 |
| W211 | Paint thinner or petroleum distillates | B211 |
| W219 | Other organic liquid (specify in comments) | B207,B208, B219 |
| **Inorganic solids -** Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable | | |
| W303 | Ash (from combustion of any type) | B303 |
| W304 | Slags, drosses, and other solid thermal residues | B303,B304 |

| W307 | Metal scale, filings and scrap (including metal drums) | B307,B308 |
|------|---------------------------------------------------------|-----------|
| W312 | Cyanide or metal cyanide bearing solids, salts or chemicals | B312,B313 |
| W316 | Metal salts or chemicals not containing cyanides | B316, |
| W319 | Other inorganic solids (specify in comments) | B311,B319, B314, B315 |

**Organic solids -** Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable

| W401 | Pesticide solids (used or discarded - not W301 contaminated soils) | B401,B402 |
|------|---------------------------------------------------------|-----------|
| W403 | Solid resins, plastics or polymerized organics | B403 |
| W405 | Explosives or reactive organic solids | B405 |
| W409 | Other organic solids (specify in comments) | B407,B409 |

**Inorganic Sludges -** Waste that is primarily inorganic, with moderate-to-high water content and low organic content; mostly pumpable

| W501 | Lime and/or metal hydroxide sludges and solids with no cyanides ( not W512 contaminated muds) | B501,B502, B305,B306 |
|------|---------------------------------------------------------|-----------|
| W503 | Gypsum sludges (from wastewater treatment or air pollution control) | B503 |
| W504 | Other sludges (from wastewater treatment or air pollution control). | B504,B511 |
| W505 | Metal bearing sludges (including plating sludge) not containing cyanides | B505,B510 |
| W506 | Cyanide-bearing sludges (not W512 contaminated muds) | B506,B507 |
| W519 | Other inorganic sludges (specify in comments - not W512 contaminated muds) | B508,B509, B515,B516, B519,B607 |

**Organic Sludges -** Waste that is primarily organic with low-to-moderate inorganic solids content and water content; pumpable

| W603 | Oily sludge (not W512 contaminated muds) | B603 |
|------|---------------------------------------------------------|-----------|
| W604 | Paint or ink sludges, still bottoms in sludge form (not W512 contaminated muds) | B601,B602, B604 |
| W606 | Resins, tars, polymer or tarry sludge (not W512 contaminated muds) | B605,B606 |
| W609 | Other organic sludge (specify in comments) | B608,B609 |

# RCRAINFO DATA INTEGRATION

> *Note:* the recent Design Team decisions regarding the restructuring of the Handler module will impact the decisions made by Implementers regarding their integration approach. The Design Team's 'document concept' has resulted in a data structure that will, for example, allow for the location address of a site to be tracked multiple times in correspondence to each document received containing that address. The integration approach described herein assumed that only one location address would be tracked for a Site and so Implementers elected which one of the two sets of that data they would prefer to retain after the integration is complete. They now have the additional option of retaining both.
>
> *It may be that the general preferences indicated by Implementers (to either merge the data that came from BRS, or to leave that aside) will still prevail, however, each Implementer will be able to reconsider those elections prior to the final data conversion being performed.*

## Introduction

The PAA implementation plan included a Program System Analysis (PSA) project to plan for and design a process by which a single integrated information source of Site Identification data could be provided for the RCRA program (see PAA Report - recommendation number 23: "Provide an integrated source of RCRA program information").

Currently, RCRAInfo has two separate repositories of Site Identification information. The basic identification data about a RCRA Site is currently maintained redundantly in both the RCRAInfo Handler module (Handler) and the RCRAInfo BRS module (BRS). Table 1 summarizes the size of the different universes of RCRA Sites in each of these two sources. Given that the BRS module contains a subset of the Handler module's dataset, the table presents only the number of RCRA Sites based on the criteria basis of the BRS dataset, specifically the LQGs and TSDFs.

| | LQG only | TSD only | Both TSD & LQG[1] | Total |
|---|---|---|---|---|
| **BRS 1989** | 17,683 | 491 | 2,534 | |
| **BRS 1991** | 20,667 | 1,108 | 2,737 | **24,512** |
| **BRS 1993** | 21,948 | 172 | 2,409 | **24,529** |
| **BRS 1995** | 19,035 | 150 | 1,832 | **21,017** |
| **BRS 1997** | 18,481 | 143 | 1,881 | **20,505** |
| **BRS 1999**[2] | 17,594 | 76 | 1,583 | **19,253** |
| **Handler**[3] | 30,395 | 264 | 1,465 | **32,124** |

**Table 1: Number of RCRA Sites in each of the BRS and Handler modules**

---

[1] This column identifies those Sites that are both an LQG and a TSDF.

[2] This table was compiled during January 2000, a time at which not all BRS 1999 data had been submitted to EPA. Therefore these numbers are lower than the final counts would represent.

[3] The numbers for the Handler module were determined by using the most current (as of January 2001) HActivity record for each Site and referring to the generator status and TSD activity fields. Generators and TSDs that were considered 'not RCRA regulated' (based on the respective RCRA Status fields) were excluded from the calculation.

The two RCRAInfo modules are currently "fed" separately, resulting in many disparities in the sets of data that is contained in the two modules. This is compounded by the data in Handler being updated on an ongoing basis, whereas BRS represents multiple biennial snapshots. The duplication between these modules is limited to basic RCRA Site identification data.

Table 2 details the database fields that exist in both of these data sources and provides a comparison[4]. The table also includes a column that shows the length of each of the fields, which is always the same for each matching field.

| RCRAInfo's Handler Module | | RCRAInfo's BRS Module | | |
|---|---|---|---|---|
| **Table** | **Field** | **Table** | **Field** | **Length** |
| Hbasic | Handler id | Bs123 form ic part 1 | Hid num | 12 |
| Hbasic | Handler name | Bs123 form ic part 1 | Hhandler | 40 |
| Hhandler | Location street no & Location street1 | Bs123 form ic part 1 | Hloc1strt | 30 |
| Hhandler | Location street2 | Bs123 form ic part 1 | Hloc2strt | 30 |
| Hhandler | Location city | Bs123 form ic part 1 | Hloc city | 25 |
| Hhandler | Location state | Bs123 form ic part 1 | Hloc state | 2 |
| Hhandler | Location Zip | Bs123 form ic part 1 | Hloc zip | 9 |
| Hhandler | Location county code | Bs123 form ic part 1 | Hloc county | 5 |
| Hcontact | Mail street1 | Bs123 form ic part 1 | Hmail1strt | 30 |
| Hcontact | Mail street2 | Bs123 form ic part 1 | Hmail2strt | 30 |
| Hcontact | Mail city | Bs123 form ic part 1 | Hmail_city | 25 |
| Hcontact | Mail state | Bs123 form ic part 1 | Hmail state | 2 |
| Hcontact | Mail zip | Bs123 form ic part 1 | Hmail zip | 9 |
| Hcontact | Contact first name | Bs123 form ic part 1 | Hcont first | 15 |
| Hcontact | Contact last name | Bs123 form ic part 1 | Hcont last | 15 |
| Hcontact | Contact Phone | Bs123 form ic part 1 | Hcont phone, Con ph ext | 10 |
| Hactivity | State Generator Status | Bs123 form ic part 1 | State Generator Status | 1 |
| Hactivity | TSD Activity | Bs123 form ic part 1 | Onsite Waste Mgmt. Status RCRA | 1 |
| | | Bs123 form ic part 1 | Onsite Waste Mgmt. Status Storage | 1 |

**Table 2: Handler / BRS cross-reference of database fields**

---

[4] This document does not concern itself with the waste generation, receipt and management data in BRS. There is no relevant equivalent in Handler and therefore this data can be 'merged' with the rest of RCRAInfo without any data integration issues needing to be addressed.

As part of the development and implementation of RCRAInfo, the site identification data currently held in the Handler and BRS modules is to be merged to form a single repository of such data. This step will remove many of the problems encountered due to the number of inconsistencies between the content of the current datasets.

In order to determine which of the two current sources should be used to support the integration work, a survey of RCRA implementers (State agencies and EPA Region offices) was conducted to understand their preferences, given their unique and detailed knowledge of the data recorded about the RCRA Sites regulated in their areas of responsibility.

This document summarizes the results of the survey and is intended to provide the RCRAInfo Design Team with the necessary direction to assist them when developing the conversion routines needed to accomplish the integration.

# Data Integration Approach

Once the data integration exercise is complete, the Handler module will become the "master" (and only) record of a RCRA Site's identification information in the future. All RCRA Site Identification data that exists in BRS will be archived and may be merged into the Handler module data. The integration items below describe each of the discrete types of data (e.g., Site name) that may be integrated from BRS, or only archived.

Implementers were given the following four choices when determining which source of data should be used to provide the master record when integrating the data:

- *Use Handler Data*. By choosing this approach, the Implementer assumes that the data that is most up-to-date and accurate is already in the Handler Module. The BRS data will be put aside.

- *Use BRS Data*. Here the Implementer assumes that the data that is most up-to-date and accurate is in the BRS Module. This data would replace the equivalent data in the Handler module.

- *Use the most recent of the Handler and BRS Data*. The third approach is slightly more complex than choosing between one and the other. This approach will use one 'date field' from each module to compare the data for each RCRA Site and determine which of the associated data is the most recent. The two fields used for this comparison are the Handler HSource field 'Receive Date' and the BRS field 'Cert Date'. These two fields will be compared, and the module with the most recent date will be used to populate the Handler module.

- *Integrate and transmit to EPA:* Where an implementer is currently translating internal system data to the Handler module, then the integration would probably be performed within the internal system. In addition, EPA is prepared to support a one-time submission of a specific implementer's data if the implementer is technically capable and willing to integrate the data.

The following sections details the specific integration options that were presented to implementers for each of the types of data to be integrated.

## *Site Name*

The table shows that nationally there is a 75% match between the 1999 BRS Site Name and the latest Site Name for those same RCRA Sites in the Handler module of RCRAInfo. This percentage reflects any inconsistencies in the data. For example, the names could have some typographical differences, or the name could have a few variations such as abbreviations or

acronyms. Ideally, during the data conversion by EPA, the data conversion routines developed would include some intelligence (for example using the FINDS abbreviation list to exclude discrepancies based solely on differing abbreviations used) to ignore such common discrepancies, however, adding this level of complexity cannot be guaranteed.

For Site Name, there are two data integration issues, and each has its own set of options.

Current Site Name

The current Site Name is the most recent name and is used when referring to a RCRA Site. Both BRS and Handler track this field. The options for integrating this data are:

| **Implementer options:** |
|---|

*1)* *Convert all BRS data into the Handler module of RCRAInfo*

This option would replace the RCRA Site's current name in the Handler module with the most recently reported name in BRS.

*2)* *Do not convert BRS data, assume that the Handler data is adequate*

Implementers would only select this option if they have already ensured that the Handler database contains the information, or if they have a low level of confidence in the validity or use of the BRS site name data.

*3)* *Make the choice by using the most recent submission to either system.*

This option will use the BRS data to overwrite the Handler data, unless the Handler Site's Name appears to have been updated since the most recent BRS data was received.

Previous Site Names

The Handler module allows for a RCRA Site's previous names to be tracked so that the history of a RCRA Site's name can be used when relevant. By tracking snapshots of data every two years, BRS indirectly keeps a track of the name changes. Although this data could be used to create a record of the name changes, it could also result in a number of previous names for a RCRA Site that are nearly identical, only differing due to typographical or formatting differences.

| **Implementer options:** |
|---|

*1)* *Convert all <u>historical</u> BRS data into the Handler module of RCRAInfo*

This approach will convert all BRS records (i.e., for all reporting years) of a RCRA Site's legal name, where that name is different to the prior reporting cycle's reported name, and will add a new (HPrevious_name) record in the RCRAInfo Handler module, with the received date set to the certification date of the BRS record[5].

*2)* *Do not convert BRS data, assume that the Handler data is adequate*

Implementers would only select this option if they have already ensured that the Handler database contains the information, or if they have a low level of confidence in the validity or use of the historical BRS site name data.

---

[5] If the implementer wanted to know at a later time whether the Site's previous name originated from BRS or not, the received date will be the only indication of the origin of the name.

## *Location Address*

The table shows that nationally there is a 68% match between the 1999 BRS data and the most recent location address information for those RCRA Site's in the Handler module of RCRAInfo.

For this conversion, the Implementer will not be allowed to choose pieces of address data from each module. Only the most current RCRA Location Address information is maintained in RCRAInfo. The location street number, location street1 and street2, location city, location county and location zip will be considered one set of data. Note that the second line of the address is often blank, which is why it matches more frequently (i.e., less opportunity for typographical errors).

**Implementer options:**

*1)  Convert the latest BRS data into the Handler module of RCRAInfo*

RCRAInfo does not allow for each submission of a RCRA Site's location information to be tracked historically.  RCRAInfo only allows current information in this field.  Therefore, this approach will convert all BRS records (i.e., for only the latest reporting year) of a RCRA Site's location address information to overwrite the Handler module address.

*2)  Do not convert BRS data, assume that the Handler data is adequate*

Implementers would only select this option if they have already ensured that the Handler database contains the information, or if they have a low level of confidence in the validity or use of the BRS location address information.

3)  *Make the choice by using the most recent submission to either system.*

This option will use the BRS data to overwrite the Handler data, unless the Handler data appears to have been modified since the most recent BRS data was received

## *Mailing Address*

The table shows that nationally there is a 61% match between the 1999 BRS data and the most recent mailing address information for those RCRA Site's in the Handler module of RCRAInfo. As with the Location Address, the mailing address can only sensibly be integrated as a whole. The options below should be considered as including all mailing address fields.

Only the most current RCRA Mailing Address information is maintained in RCRAInfo. The mailing street1 and street2, mailing city, and mailing zip will be considered one set of data.

**Implementer options:**

*1) Convert the latest BRS data into the Handler module of RCRAInfo*

RCRAInfo only tracks current mailing address data. Therefore, this approach will convert the latest BRS record of a RCRA Site's mailing address information to overwrite the Handler module address.

*2) Do not convert BRS data, assume that the Handler data is adequate*

Implementers would only select this option if they have already ensured that the Handler database contains the information, or if they have a low level of confidence in the validity or use of the BRS mailing address information.

*3) Make the choice by using the most recent submission to either system.*

This option will use the BRS data to overwrite the Handler data, unless the Handler data appears to have been modified since the most recent BRS data was received.

## *Contact Information*

The table shows that nationally there is only a 29% match between the 1999 BRS data and the most recent contact information for those RCRA Site's in the Handler module of RCRAInfo. Only the single, most current RCRA Site Contact will be maintained in RCRAInfo. The contact first and last name, and phone number will be considered one set of data.

> **Implementer options:**
>
> *1) Convert the latest BRS data into the Handler module of RCRAInfo*
>
> RCRAInfo does not allow for each submission of a RCRA Site's contact information to be tracked historically.  Therefore, this approach will convert the latest BRS record (i.e., for only the latest reporting year) of a RCRA Site's contact information to overwrite the Handler module record.
>
> *2) Do not convert BRS data, assume that the Handler data is adequate*
>
> Implementers would only select this option if they have already ensured that the Handler database contains the information, or if they have a low level of confidence in the validity or use of the BRS contact information.
>
> *3) Make the choice by using the most recent submission to either system.*
>
> This option will use the BRS data to overwrite the Handler data, unless the Handler data appears to have been modified since the most recent BRS data was received

## *Generator Status*

Generator Status describes whether the site is an LQG, SQG, CESQG, or none of the above. The table shows that nationally there is a 67% match between the 1999 BRS data and the most recent generator status for those RCRA Site's in the Handler module of RCRAInfo. This takes into account LQGs in BRS as well as TSDFs that also identified themselves as LQGs.

> **Implementer options:**
>
> *1)  Do not convert BRS data, assume that the Handler data is adequate*
>
> This approach should be employed when the implementer believes that the BRS generator status reflects a snapshot of a generator's status, and should not be included in the Handler module, which is intended to reflect the normal / routine generator status of the generator.
>
> *2)  Convert all BRS data into the Handler module of RCRAInfo*
>
> RCRAInfo allows for each submission of a RCRA Site's generator status to be tracked historically, and to designate the source of that information (i.e., "Annual / Biennial Report" for this type of data), as well as the date that the information was received. Therefore, this approach will convert all BRS records (i.e., for all reporting years) of a RCRA Site's generator status by adding a new Hactivity record in RCRAInfo, with the received date set to the certification date of the BRS record, and the source of the data set to "Annual / Biennial Report".

## *TSD Activity*

The PSA Project Team has decided that the TSD Activity information in BRS should not be merged with the Handler data. The data within the two modules is felt to be irreconcilable for the following reasons:

- Historically, BRS reporters have been asked not to report as a TSDF if they are undergoing closure[6], whereas the TSD Activity information in the Handler module is intended to reflect all types of TSDFs.

- With the RCRAInfo permit module being the main source of TSDF activity information, the Handler module's TSD Activity flag is mostly useful as an indicator of site's that wish to apply for a permit. Such sites would not have submitted a biennial Hazardous Waste Report for that reason yet, and BRS might be a bad indicator of such sites.

Therefore, the Handler and Permitting modules' data quality for TSDFs accuracy would worsen if the BRS data were merged with it.

# Implementer Integration Decisions

The survey materials summarized in this document were distributed to representatives from all implementers.  Following a review period, implementer responses were collated.  Table 3 summarizes the total number of implementers that selected each of the options for each of the decision items discussed in the previous section.

|  | Current Site Name | Previous Site Name | Location Address | Mailing Address | Site Contact | Generator Status | |
|---|---|---|---|---|---|---|---|
| **BRS overlaid** | 3 | 15 | 3 | 3 | 4 | 6 | **14%** |
| **Handler only** | 24 | 20 | 26 | 25 | 21 | 29 | **60%** |
| **BRS if latest** | 8 | N/A | 6 | 7 | 8 | N/A | **12%** |
| **Translate** | 6 | 6 | 6 | 6 | 6 | 5 | **14%** |
| **Responses:** | **41** | **41** | **41** | **41** | **39** | **40** | |

**Table 3: Summary of implementer responses.**

Table 4 on the next page shows the details of each respondent's elections. The second column indicates if a State agency or an EPA Regional Office provided the response. Note that the number in each cell represents the options listed in the text above, and not necessarily the order of the rows in Table 3.

---

[6] Specifically, the report states that if there wasn't any activity in a permitted unit, to not report as a TSDF; of course the same site may have to report if it is an LQG, but that is not assured.

---

| State / Agency | Response from State or Region | Current Site Name | Previous Site Name | Location Address | Mailing Address | Site Contact | Generator Status |
|---|---|---|---|---|---|---|---|
| AK | R10 | 2 | 2 | 2 | 2 | 2 | 1 |
| AL DEM | S | 2 | 2 | 2 | 2 | 2 | 1 |
| AR DEQ | S | 2 | 1 | 2 | 2 | 2 | 1 |
| AZ DEQ | | | | | | | |
| CA DTSC | | | | | | | |
| CO DPHE | S | 2 | 1 | 2 | 2 | 1 | 2 |
| CT DEP | S | 2 | 2 | 2 | 2 | 2 | 1 |
| DC Health | S | 1 | 1 | 2 | 1 | 1 | 1 |
| DE DNREC | | | | | | | |
| FL DEP | S | 3 | 1 | 3 | 3 | 3 | 2 |
| GA DNR | | | | | | | |
| GU EPA | | | | | | | |
| HI Health | | | | | | | |
| IA DNR | R7 | 3 | 1 | 3 | 3 | 3 | 2 |
| ID DEQ | R10 | 2 | 2 | 2 | 2 | 2 | 1 |
| IL EPA | S | 1 | 1 | 1 | 2 | 2 | 2 |
| IN DEM | S | 2 | 2 | 2 | 2 | 2 | 1 |
| KS DHE | S | 3 | 1 | 2 | 2 | ? | 1 |
| KY EPD | S | 2 | 2 | 2 | 2 | 2 | 1 |
| LA DEQ | S | 2 | 2 | 2 | 2 | 2 | 1 |
| MA DEP | S | 2 | 2 | 2 | 2 | 3 | 1 |
| MD DE | | | | | | | |
| ME DEP | R1 | 2 | 2 | 2 | 2 | | 1 |
| MI DEQ | S | 4 | 4 | 4 | 4 | 4 | 4 |
| MN PCA | S | 1 | 1 | 1 | 1 | 1 | 2 |
| MO DNR | S | 3 | 1 | 3 | 3 | 3 | 1 |
| MS DEQ | S | 2 | 2 | 2 | 2 | 2 | 1 |
| MT DEQ | S | 2 | 1 | 2 | 2 | 2 | 1 |
| NC DENR | S | 2 | 1 | 2 | 2 | 2 | 1 |
| ND Health | S | 2 | 2 | 2 | 2 | 2 | 1 |
| NE DEQ | | | | | | | |
| NH DES | S | 2 | 2 | 2 | 2 | 2 | 1 |
| NJ DEQ | R2 | 4 | 4 | 4 | 4 | 4 | 4 |
| NM Env. | | | | | | | |
| NN EPA | | | | | | | |
| NV DEP | S | 2 | 1 | 2 | 3 | 3 | 1 |
| NY DEC | R2 | 4 | 4 | 4 | 4 | 4 | 4 |
| OH EPA | S | 3 | 1 | 3 | 3 | 3 | 1 |
| OK DEQ | S | 2 | 2 | 2 | 2 | 2 | 1 |
| OR DEQ | R10 | 2 | 2 | 2 | 2 | 2 | 1 |
| PA DEP | S | 3 | 2 | 1 | 1 | 1 | 2 |
| PR EQB | R2 | 4 | 4 | 4 | 4 | 4 | |
| RI DEM | R | 4 | 4 | 4 | 4 | 4 | 4 |
| SC DHEC | S | 2 | 2 | 2 | 2 | 2 | 1 |
| SD DENR | | | | | | | |
| TN DHE | S | 2 | 2 | 2 | 2 | 2 | 1 |
| TX NRCC | | | | | | | |
| UT DEQ | S | 3 | 1 | 3 | 3 | 3 | 1 |
| VA DEQ | | | | | | | |
| VI | R2 | 4 | 4 | 4 | 4 | 4 | 4 |
| VT DEC | | | | | | | |
| WA Ecology | R10 | 2 | 2 | 2 | 2 | 2 | 1 |
| WI DNR | S | 2 | 2 | 2 | 2 | 2 | 1 |
| WV DEP | S | 2 | 2 | 2 | 2 | 2 | 1 |
| WY DEQ | S | 3 | 1 | 3 | 3 | 3 | 1 |

**Table 4: Detail of implementer responses.**

# Conclusions

The PSA Project Team reviewed the survey responses and determined that the default approach to be used for non-responsive implementers should be to use the latest Handler module data as the primary source. BRS IC Form data will therefore NOT be integrated into the Handler module.

The schedule for this conversion will be determined by the RCRAInfo Design Team, but should be finalized in time for receipt of the new Site Identification forms that should occur with the 2001 Biennial Report cycle. Adequate time should be provided to allow implementers to test the conversion of data prior to its final implementation.

For the implementers who responded to the survey and who are listed in Table 4, the PSA Project Team recommends that the preferred choices should be used when converting the respective data sets.

Based on the responses from the national review, the 'default' approach to be used for the integration has been changed from that which was included within the national review document. This should be applied for all non-respondent implementers (i.e., those that are not included in Table 4). The PSA Project Team recommends that a confirmation should be sent out to all non-responsive implementers once the test conversion has been performed according to this default with enough time for those implementers' to test the conversion and comment

The RCRAInfo design team will develop the data conversion routines to implement the Implementers' data integration preferences by the end of this year. This will allow the data submitted for the 2001 Hazardous Waste Report to be absorbed within the final integrated set of data. Ideally, the Design team will allow implementers to review the results of this conversion during the system-testing phase of their project, and allow Implementers to change their preferred option at that point based on their satisfaction with the results of the conversion.

THIS PAGE INTENTIONALLY LEFT BLANK

# SITE VERIFICATION

## Introduction

### *Purpose*

This section is intended to help RCRA Implementers to develop (or improve upon their existing) verification process so that the quality of their Site Identification data meets the goals set by the State-EPA WIN/INFORMED initiative. Although a number of RCRA Implementers have already achieved these goals, the majority has not, and of those, many have already indicated their desire to improve their situation. This section is intended to provide guidance regarding how verification can be achieved based on the experiences of those that already have implemented some verification mechanism.

### *Background*

One of the key PAA recommendations; "*Recommendation 2: Study the feasibility of periodic site verification*", is concerned with improvement of the quality of basic site information held by the RCRA program through regular verification of basic RCRA Site information[7].   During 2000, a study was undertaken to consider the alternative mechanisms by which identification data might be verified by RCRA Sites. This study attempted to estimate the cost and burden imposed upon the regulated community and RCRA Implementers.

The study findings and recommendations were subject to national review by all States, Territories, EPA Regional Offices and the EPA Office of Solid Waste and Office of Enforcement and Compliance Assurance.  Following this national review, the WIN/INFORMED Coordinating Committee and Executive Steering Committee agreed that the recommendation should be considered further during the Program System Analysis (PSA) phase when the implications of the recommendation would be further evaluated and implementation mechanisms designed.

The goal of the Program System Analysis (PSA) phase was to clearly define the implementation mechanism(s) for the recommendation.  Outreach tasks were also conducted to communicate the benefits of the recommendation to States and to the regulated community and to obtain a greater understanding of the costs and benefits associated with its implementation. The outreach tasks were also used to identify barriers to implementation along with an understanding of how to minimize those barriers and maximize benefits for States and the industry.

### *Document Organization*

The remainder of the Implementation Guide is organized into the following sections:

**Verification Overview**

Provides an overview of the issues and needs for keeping Site Identification information up to date, along with the benefits that have been identified nationally.

---

[7] In summary, this recommendation states that States and EPA need to get more up-to-date basic identification information about the RCRA Sites that they regulate (i.e., their business name, address, contact person, and types of RCRA regulated activities).  To achieve this, RCRA Sites should periodically review the identification information that each Implementer knows about the Site and identify any changes that have occurred to that information.

**Implementation Principles**

Specifies the agreed upon goals for ensuring a consistent minimum level of data quality nationally, and the flexibility required for RCRA Implementers to support these goals.

**Alternative Verification Approaches**

Presents a number of different scenarios in which Site Identification data can be verified, based on both the experiences of State and Regions that are currently performing this process, as well as new and upcoming opportunities made possible through the use of the Internet.

**Appendix: Results Of Outreach To Implementers And Regulated Community**

Summarizes the responses received from States, Regions and the regulated community during an exercise to determine their support and gain their input upon how Site Verification should be implemented.

**Appendix: Case Studies Of State Verification Processes**

Provides some information about how a set of States is currently performing Site Verification, and the results they have found.

**Appendix: Example Site Verification Form**

Presents an example reporting form that demonstrates the types of information that should be verified, along with a format similar to that used by a number of Implementers.\

# Verification Overview

## *Process Summary*

To have a meaningful picture of the regulated universe, Implementers must be able to distinguish which Sites have ongoing RCRA Activities. This information supports various EPA and State program activities.

The notification process is the initial means for identifying hazardous waste sites under the RCRA program. Once a RCRA Site submits a Site Identification Form, there is no Federal regulation requiring the RCRA Site to inform the Implementer of any changes to the reported information[8]. For example, if the RCRA Site's generator status changes from large quantity to small quantity or it is no longer handling hazardous waste or changes the types of waste being generated, the Implementer is not always notified. When RCRA Sites cease operation, or stop generating hazardous waste, they can be considered inactive for that type of activity. Given this lack of regular update, the site information available to the RCRA program can quickly become outdated and inaccurate.

When reviewing all of the national data, most of this information was only collected once (via an initial Notification Form) and is many years old. Many States and Regions have already implemented varying forms of verification processes and have already achieved an excellent level of data quality. However, others do not perform any form of verification, and the data about many of their RCRA Sites is likely to be out of date.

It is very important for the state and federal environmental agencies to have accurate information about which companies are generating, transporting and/or managing hazardous waste so that

---

[8] with the exception of LQGs and TSDFs which have a federal biennial reporting requirement, and for some additional instances for TSDFs.

they can ensure that this is being performed safely and correctly. This information is also shared with the public (increasingly more easily via the Internet) who expect the information to represent the current situation.

To improve the quality of RCRA Site information in national and State systems, Implementing States and EPA Regions are being encouraged to conduct some type of verification process on a regular basis. Where possible, Implementers should attempt to conduct this verification process at a minimum for all active TSDFs, LQGs, SQGs, and transporters that have previously notified and which have a valid EPA identification number. Response by the RCRA Site would be voluntary unless otherwise required by State regulations.

This verification process should, where possible, include the following nationally required information needs. These represent most of the information that is currently collected on the new federal Site Identification form[9].

- EPA identification number
- Site name
- Location address
- Land owner type
- Owner name and type
- Operator name and type
- Site contact name, number and e-mail address
- Mailing address
- Industry types
- Regulated Waste Activities (e.g., generator status)

Although the current biennial Hazardous Waste Reporting process does require that most of this information is 'refreshed' every two years, this process only covers a sub-set of the RCRA Sites. A number of State environmental agencies have already taken steps to resolve this issue by either requiring through regulation, or optionally requesting that all regulated Sites inform the agency of any updates to the information on record at the agency. Most of these agencies have relied on one of two methods, either requiring a RCRA Site to fill out a new form whenever a change occurs to that information, or by periodically sending a pre-printed, filled out form so that the RCRA Site can just document any changes required and return it. In many cases, these RCRA Sites have commented that they find the process very straightforward and easy to support.

## *Expected Benefits*

Implementation of this recommendation will provide Implementers and EPA with significant improvements in the overall quality of the information about the universe of RCRA Sites that they regulate. Some of the benefits that may be expected from this improvement in information quality are:

---

[9] If you would like to learn more about the new Site Identification form, please review the information that is available at the following web site:

**www.epa.gov/epaoswer/hazwaste/data/brs01/forms.htm**

- More accurate resource allocation and planning for States, EPA Regions and EPA Headquarters.

- More accurate planning and targeting for State and EPA inspections and technical assistance visits.

- Will provide more accurate and supportable information to respond to public information requests, resulting in increased public confidence in the information.

- Will enable more accurate regulatory impact analysis.

- More accurate environmental justice analysis.

- Better targeting for waste minimization activities.

- Will provide better data to support the assessment of program effectiveness.

- Critical information for State fee collection mechanisms.

- Able to provide high quality, up to date information to local government agencies to support their regulatory responsibilities.

- Potential reduction in costs associated with returns of agency mailings to the regulated community, for example, of Hazardous Waste Report forms, regulatory bulletins and so on.

- Reduction in costs associated with reduced resources required to conduct site visits by inspectors and technical assistance staff.

## Implementation Principles

During the development of the recommendation for RCRA Site verification, the PSA Team and national reviewers identified a number of basic criteria that must be part of an effective implementation.

**Data collected and managed by RCRA Implementers for the 'nationally' required Site Identification information needs should comply with, or exceed a specific level of data quality.**

The following national information needs should be included within any verification mechanism:

- EPA identification number

- Site name

- Location address

- Land owner type

- Owner name and type

- Operator name and type

- Site contact name and phone number

- Mailing address

- Industry types

- Regulated Waste Activities (e.g., generator status)

**The verification process should ensure that this information is never more than two years old for TSDFs and LQGs, and five years for SQGs and Transporters.**

These data quality goals were agreed by the WIN/INFORMED States and EPA to provide the best return in terms of improved information quality with limited burden increase.  However, national reviewers also stressed that each Implementer must have the ability to conduct the process more frequently if desired.  The Implementer will determine the best frequency for this process taking into account their resource and other constraints and other reporting requirements.

**Implementers and the regulated community will not be required to implement or respond to the verification requirement.**

Although Implementers will be encouraged to conduct the verification process and RCRA Sites will be encouraged to respond, there is not enough current support for a federal regulation and so this process must remain optional.  Individual States may elect to mandate the verification requirement if desired and the Implementer may take appropriate follow-up actions at their discretion.

**Implementers must be allowed to apply the core principles of the recommendation using the most appropriate approach.**

While this recommendation has resulted in a number of preferred options for the implementation of verification, the practical application of the recommendation by each Implementer must be allowed to vary according to the Implementer's specific needs.

# Alternative Verification Approaches

This section describes multiple ways that verification can occur, along with the data management considerations and a summary of the new system components that would be required to support this process.

These alternatives are not mutually exclusive. An Implementer could use a combination of these approaches. For example, inspections could be used to verify the data, and for any sites that had not been verified with the required time frame (e.g., 5 years for SQGs), a pre-printed verification form could be sent out.

## *Data Collection Processes*

This section outlines a number of alternative scenarios for the implementation of elements of the verification recommendation. For each option, a description of the basic design is provided followed by a discussion of the pros and cons of the option.

These options provide a variety of ways that verification can occur. It is anticipated that Implementers and RCRA Sites may wish to employ more than one of these options so that they get the greatest level of coverage and frequency.

A number of the options include the use of a form that has been pre-printed with the RCRA Site's data included, thus allowing the RCRA Site to note any changes that had occurred since the data was previously collected. This is an approach that has already been proven by multiple States and Regions to reduce the burden for both Implementers and reporters. (Note: EPA intends to provide a report that will produce these pre-printed forms as described in the 'Information System Enhancements' section below).

The reader should refer to the last Appendix that provides an example form that could be used to perform a verification exercise. The form is an almost exact replica of the new Site Identification form and demonstrates the types of information that would be verified and updated where necessary. By duplicating the format of the Site Identification form, the same instructions booklet can be used to guide the respondent, although it is recommended that a shortened version be used to encourage greater response when the response is voluntary.

The major difference with the form attached here is that for each 'field' on the form, there is space for the current data (pre-populated) and for amended data (to be filled in only if the current data needs to be updated). On the third page, the tick boxes are duplicated (separated by an arrow), and would indicate the current (left) and amended (right) data. Note that the attached form is only intended to provide the reader with a demonstration of what the form might look like. For example, the final form might be better formatted with the populated data content and enterable fields (for any changes) split between the left and right hand sides of the page. Also, some implementers believe that the responses are more reliable if the 'regulated activity' information (question 10 on the form) is completed anew each time, instead of including the current data on the form.

Although this form represents a paper-based approach, one can imagine an equivalent version that could also allow for some of the more automated verification processes (e.g., web based data entry).

## General Data Collection Suggestions

The following suggestions are made based on the experience of Implementers and the input received from the regulated community.

### Identifying RCRA Sites to Verify

Given that any form of verification incurs some burden, Implementers may want to target a selection of RCRA Sites to verify. This approach can be used either to allow for discrete, manageable sets of RCRA Sites to be verified (instead of infrequent mass efforts), as well as focusing the effort on RCRA Sites that have not been contacted for the longest time. A number of methods can be used to help target sites, a few that have been proven to work well by Implementers are:

- Target a sub-universe based on criteria such as type (i.e., generator status, transporters, TSDFs), county, and age of the data contained about them.

- Exclude RCRA Sites that have reported as being no longer 'active', particularly if subsequently confirmed by an inspection.

- If available, use manifest data to identify RCRA Site's that either:

  - appear not to be generating hazardous waste anymore (or vice versa), or

  - have modified their mailing address.

### Verification Request Letter

For those RCRA Implementers that will be requesting this information from RCRA Sites on a voluntary basis, it is very important to provide them with a succinct explanation of why they are being asked to verify their information. By expressing the most significant benefits that the Implementer will gain, it is anticipated that the response rate will increase. Additionally, if there is any way that the Implementer can provide some incentive for the RCRA Site to respond that would certainly help. Many of the current Implementers that verify, tie the process in with a fee collection process, which clearly ensures a much greater response rate.

### Non-respondents

When using a voluntary process it is hard to discern whether a lack of a response is due to the RCRA Site being no longer active, or due to their election not to respond. However, if adequate resources are available the following types of steps may be taken:

- Call the RCRA Site directly, ideally to persuade them to respond, but at least to ascertain whether they are still in business.

- Prioritize such sites for upcoming inspections.

- Review ancillary sources of information to determine whether they are no longer active (e.g., State business license register, web research).

- Contact a TSD known to have received waste from the RCRA Site in the past to determine whether they are still active.

## Scenario 1: Include pre-populated Site Identification forms with the Hazardous Waste Report forms packets mailed biennially to each RCRA Site.

Among those States who currently conduct some form of regular verification, the preferred mechanism employs pre-printed forms containing the latest information that the Implementer has for the RCRA Site.
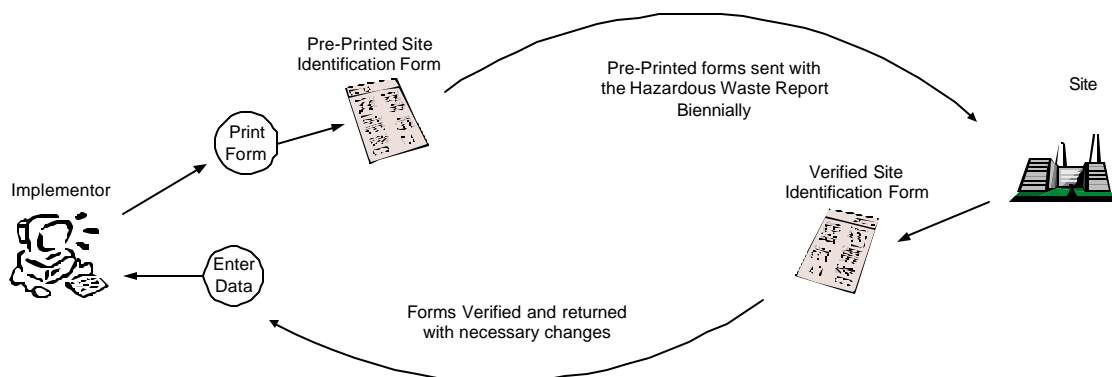


This scenario would couple the use of these pre-printed forms with the biennial submission of the *Hazardous Waste Report* by LQGs and TSDFs. A *Site Identification* form would be prepared for each RCRA Site, including the current data about that RCRA Site available to the Implementer. This may be derived from the national RCRAInfo system or the Implementers own system if they have one. Where the national or Implementer systems include historical data, the latest information from any source will be used to populate the form.

*Hazardous Waste Report* forms packets would then be prepared for each RCRA Site, including the relevant *Site Identification* form and would be mailed to the RCRA Site. The RCRA Site would then annotate the pre-populated form to correct any changes or errors and would complete the additional forms concerned with waste generation and management information before signing the report to authorize the information contained and submitting the complete packet to the Implementer.

Implementers would be able to apply the changes to site information indicated by the RCRA Site to either their own or the national information systems. The Implementer may customize the *Site Identification* form and therefore the data that is pre-populated where they use their own systems that have differing data requirements to the national system. In such cases, however, the Implementer must still provide the national information needs to the national information system.

The approach would be driven largely by the Implementer's waste reporting requirements and would be dependent on the use of known information. Verification would be considered optional since the RCRA Site may choose not to update the *Site Identification* form. By coupling the process with the *Hazardous Waste Report* submission, the Implementer will ensure that the process is conducted at least biennially and potentially more frequently in those States that have annual or quarterly waste reporting. The universe targeted would, however, be limited to only LQGs and TSDFs. Electronic reporting mechanisms would not be a part of this scenario.

When assessing implementation costs it is important to note that mailing of the *Hazardous Waste Report* forms would become more complex since each mailing would need to be customized to the specific RCRA Site, to include the correct pre-populated form information.

Many RCRA Sites and Implementers now use third-party reporting software to submit biennial *Hazardous Waste Report* forms, rather than paper-based reporting.  This scenario would not have any impact in these cases but may be combined with the next scenario.

Note: this scenario does not need to be performed in conjunction with waste reporting. For SQGs and Transporters, pre-populated forms could be sent to them at any time, along with a request letter asking them to make their corrections and return it.

## Scenario 2: Include pre-populated Site Identification information in third party Hazardous Waste Reporting software customized and delivered to each RCRA Site.

This scenario essentially applies the basic principles of the previous scenario to those situations where RCRA Sites complete their *Hazardous Waste Report* form submissions using third-party reporting software, such as Turbowaste, EMCI's, or Florida's BR Disk.

In this case, the third-party software would be customized to the specific RCRA Site such that known site information is pre-populated into the software and made available through the portion of the software that collects site identification data such that the data may simply be updated. The importing of this data could be achieved via the internet. The software could initiate a request (based on an EPA ID number) to an Implementer or EPA web site that would automatically produce a file for download containing that RCRA Site's most recent identification data.

It is worth noting that for RCRA Site's that continue to use the same software as for previous Hazardous Waste Reports, they may have the ability to update that data instead of re-entering it, and this may be their preference.
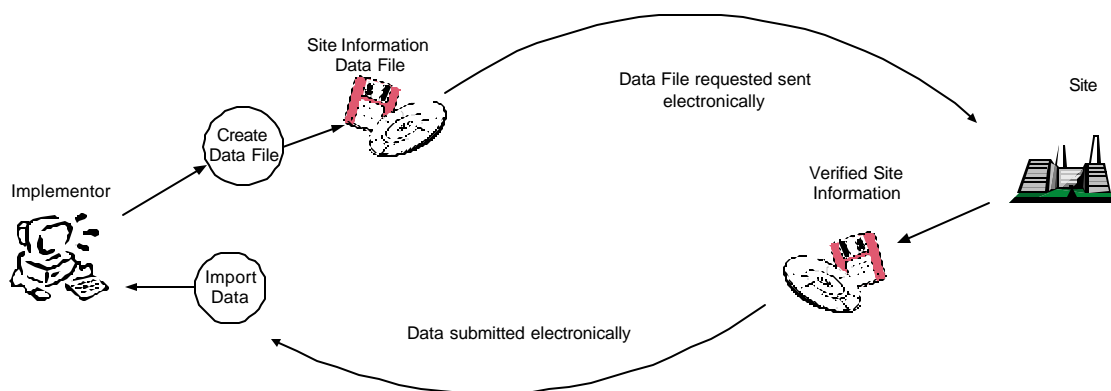


Once data is entered in to the third-party software, the resulting reports may either be printed or in some cases, transmitted electronically to the relevant Implementer.  When printed, the forms will be signed to provide authority for the changes.  Where the data is to be transmitted electronically, some form of security certificate would be included in the third-party software to identify the RCRA Site and authorize the information provided.

Again, Implementers would be able to apply the changes to site information indicated by the RCRA Site through the reporting software to either their own or the national information systems.

Verification would again be considered optional since the RCRA Site may choose not to use the reporting software for its submissions.  By coupling the process with the *Hazardous Waste Report* submission, the Implementer will ensure that the process is conducted at least biennially, although, again, the universe targeted would be limited to only LQGs and TSDFs.  Use of this

scenario would incorporate the electronic reporting opportunities that may already be included in the third-party software products.

When assessing implementation costs it is important to note that customization of the third-party reporting software to each specific RCRA Site, and to potentially include security certificates, may present significant additional technical challenges. However, this scenario has been included because there is at least one existing state (Texas) that is currently providing sets of this data electronically for each RCRA Site. EPA's Central Data Exchange initiative should provide the infrastructure necessary to support legally binding, fully-automated electronic reporting.

### Scenario 3: Provide "on-demand" capability to allow RCRA Sites to request pre-populated Site Identification forms.

This scenario would allow a RCRA Site to call into an automated phone system to request that a *Site Identification* form be sent to them. The RCRA Site would identify itself using its EPA identification number and would request either that a form be mailed or faxed. For the latter, the caller would then provide fax number information. This system could be set up at the national level, managed by EPA, or by each Implementer using their own RCRA system.

Once a request is received the Implementer's or EPA's system would produce the form, pre-populated with the latest information about the RCRA Site and would direct the form to either the mailing address or fax number provided.
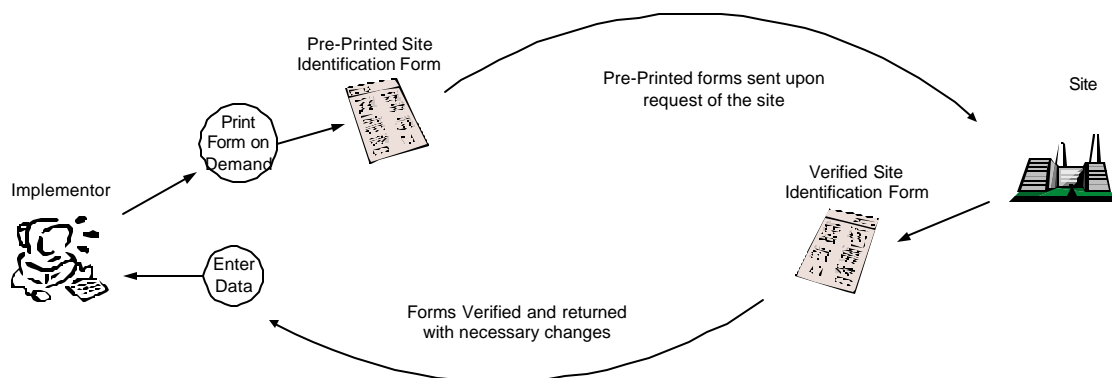


The RCRA Site would annotate the pre-populated form to correct any changes or errors before authorizing and submitting the completed form to the Implementer. The Implementer would be able to apply the changes to site information indicated by the RCRA Site to either their own or the national information systems
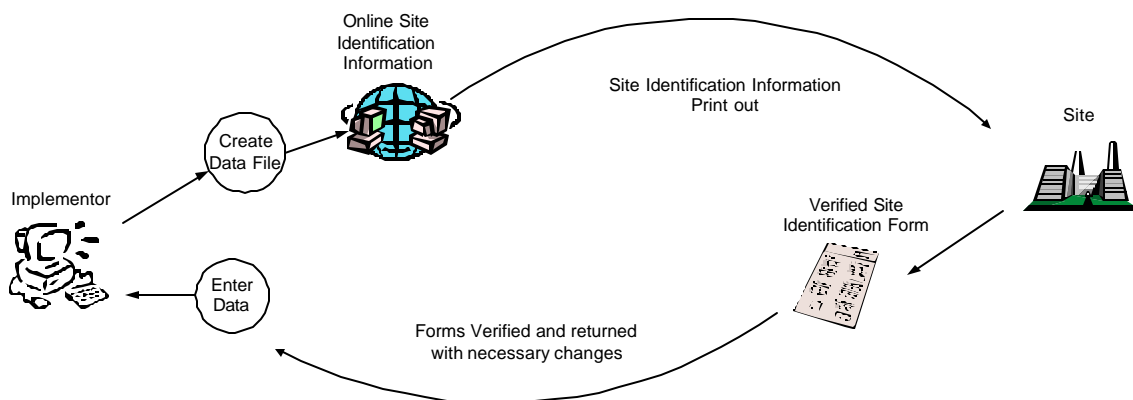
This scenario allows the Implementer to develop the specific details and meets the requirement of optionality. Once again, the latest known information about the RCRA Site is used to expedite the response. However, this scenario would not ensure verification from either the desired universe or at the desired frequency, without active Implementer outreach and "marketing".

## Scenario 4: Provide pre-populated Site Identification forms online for printing and manual submission by RCRA Sites.

This scenario relies on making site identification data held in national and potentially, Implementer-specific systems, available online.  The RCRA Site would be able to produce a *Site Identification* form online, which would be pre-populated with the latest information available in either the national or Implementer systems.

The functionality to produce this report could be provided on either the EPA RCRAInfo Web site or on the Implementer's Web site.  Security should not be an issue, given that the information contained on the form is not confidential.

The RCRA Site would then print the report, amend or add to the details as necessary and would then sign the report to authorize the information.  Implementers would be able to apply the changes to site information indicated by the RCRA Site to either their own or the national information systems.



This scenario allows the Implementer to develop the specific details and meets the requirement of optionality.  Once again, the latest known information about the RCRA Site is used to expedite the response.  However, this scenario would not ensure verification from either the desired universe or at the desired frequency, without active Implementer outreach and "marketing".

Development of the necessary Web-based reporting mechanism would likely be relatively simple and similar mechanisms are already available at existing Implementer and EPA Web sites.  Once this scenario is in place, it would require only minimal support from Implementers, thereby reducing the burden on that group.

## Scenario 5: Provide pre-populated Site Identification forms online for correction and submission online by RCRA Sites.

This scenario is essentially the same as the previous scenario in that site identification data held in national and potentially, Implementer-specific systems, would be made available online to RCRA Sites. The RCRA Site would be able to produce a pre-populated *Site Identification* form online. However, instead of manually applying changes to a printed copy before submitting the authorized changes to the Implementer, functionality would be provided through the relevant Implementer or EPA Web site to enable the RCRA Site to amend the site information online and to submit those amendments electronically.

Appropriate security certificate or electronic signature mechanisms would be put in place to ensure that only the appropriate individuals were able to change the details for the RCRA Site.



The submitted changes would not be automatically applied to the Implementer or national data sets until reviewed and quality assured by the Implementer.

This scenario allows the Implementer to develop the specific details and meets the requirement of optionality. Once again, the latest known information about the RCRA Site is used to expedite the response. However, this scenario would not ensure verification from either the desired universe or at the desired frequency, without active Implementer outreach and "marketing".

Development of the necessary Web-based reporting mechanism would be more complex than the previous scenario, simply because of the need for secure data submission. However, once in place this scenario would require only quality assurance support from Implementers.

Development of the appropriate security certificate or electronic signature mechanisms should incorporate standards developed for the electronic submission of other environmental regulatory compliance data, for example, those developed in support of the Central Receiving initiative. This might be achieved simply by securing the submission of changes to a RCRA Site-specific password.

## Scenario 6: Provide data capture mechanism for use by inspectors.

This scenario differs from the previous alternatives in that the burden for recording the changes to the site identification information for the RCRA Site would be assumed by an inspector representing either the Implementer or the EPA.

This scenario calls for the inspector to be provided with a pre-populated form in either electronic or paper media prior to visiting a RCRA Site. The form would be populated using the latest data available in the Implementer-specific or national systems. During the course of the visit, the inspector would record any changes to the site information that are identified on either the paper form or electronic record. Following the inspection the Implementer would apply any changes to the Implementer-specific and national systems. Alternatively, the inspector could assist the site
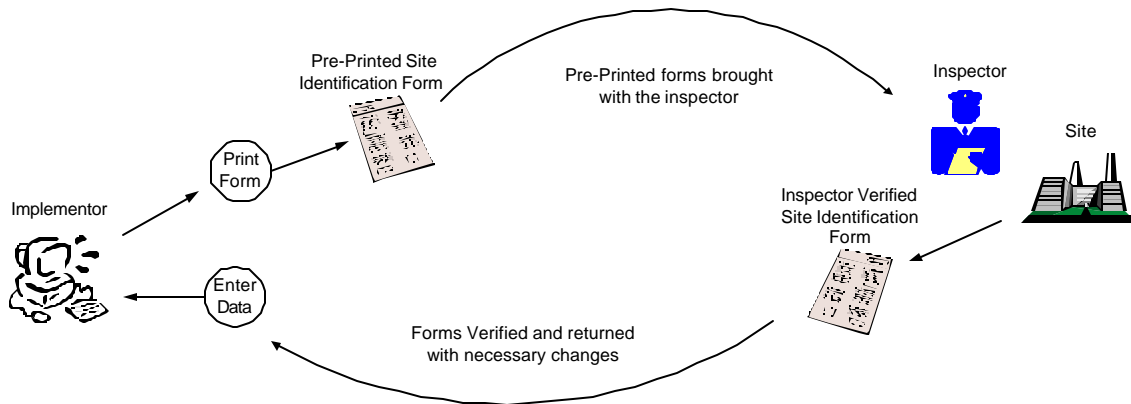


representative in filling out the form allowing the Site to sign the form at that time for formal submission to the agency.

This scenario could be applied at the Implementer's discretion. The frequency and universe targeted would depend on the inspection practices employed by the Implementer, and if performed frequently enough for the entire universe(s) of Sites could alone be sufficient to meet the criteria of the recommendation.

## Scenario 7: Require any changes to Site Identification data to be reported

This scenario differs from the previous alternatives in that it requires a State regulation to be implemented. This regulation would require regulated Sites to inform the State agency of any changes that have occurred to their Site Identification data. A number of States are already using this approach and specify a duration (e.g., 90 days) in which the updated information must be provided to the agency. Typically, these States have required that blank forms be filled out anew, along with the corrections incorporated.



Environmental
Agency

Site Identification
Form

Hazardous
Waste Site
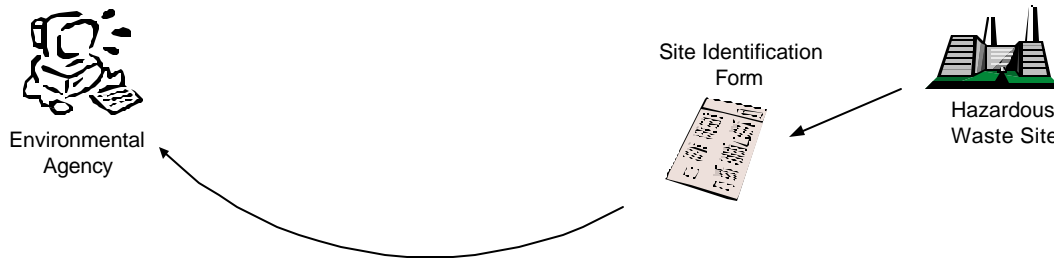
Clearly this scenario could be used in conjunction with Scenario 3 above, which would allow a RCRA Site to request, or print from the web, a version of their personalized Site Identification form. By providing this alternative to blank forms, the burden of responding may be reduced for both parties.

The likely success of this scenario if implemented on a voluntary basis is unknown, but probably not good given that many RCRA Sites may forget about notifying the agency if it were only optional that they do.

## *Information System Enhancements*

Assuming that any of the above options may be implemented, RCRAInfo and some State systems will need to be enhanced to accommodate these changes.  EPA is intending to implement the necessary capabilities in phases as soon as is practical. The following is a list of the automated changes prescribed by the scenarios, and a reference to the scenario requiring the change.

### Verification Report

*References Scenario 1, 3 & 6*

This would be a highly formatted report that would look similar to the example provided in the last Appendix. The data for the Site Identification fields will be obtained from the RCRAInfo database's Handler module (based on the Implementer-specific integration of the BRS data into the Handler module in the near future).

This report will be usable for mailing to the RCRA Site as well as for a fax back option, and the online version of the form that would be available for printing (e.g., from Envirofacts).

This report would allow the Implementer to specify which RCRA Sites the 'report' should encompass. Although the report would be able to produce a single form (based on an EPA ID number), this capability would also allow the Implementer to produce multiple pre-populated verification forms for the universe of RCRA Sites they wish. The types of parameters would include:

- Type of regulated activity (e.g., LQGs, SQGs, Transporters, TSDs, etc.)
- Location state
- RCRA Sites that have not verified their data in the last two or five years

These parameters could be used in conjunction (e.g., all TSDs and/or LQGs in my State), and the order they are printed should also be Implementer defined (e.g., order them by the mailing city to aid in the mail out).

Ideally, the report could also be accompanied by a mailing label report that would contain mailing labels ordered identically to the verification reports. This would ease the mailing distribution process if a mass mailing were intended. This report should allow the Implementer to download it electronically so that it can be imported into software that would print the labels in the Implementers desired format, or mail merged with a customized request letter.

Some States that have implemented this have found it convenient to add bar code to the form that identifies the EPA ID number. This can be useful if a high volume of forms is received and a registry of those forms is convenient to manage the data entry process over multiple weeks.

### Web Data Entry

*References Scenario 5*

One possible solution to Site Verification is creating a web application that allows for data entry. There is certain functionality that needs to be developed to allow for updates to the database.

The approach used to allow for legally supportable submissions of data to agencies is still being developed. Furthermore, the implementing agency would determine whether they would employ their own requirements and receive the data submissions directly, or alternatively rely on EPA's

federal electronic reporting mechanisms and require their RCRA Site's to use RCRAInfo's web data entry directly.

Although EPA's Central Data Exchange (CDX) approach to environmental reporting has not yet been finalized, the following is an example scenario to demonstrate the type of process that may be used to support electronic reporting. The system would require an Implementer to register and receive a used id and password, and setup a Trading Partner Agreement (TPA). The TPA is a document outlining the rules and regulations that must be followed between the two parties. The TPA is also signed in 'wet ink' and documented to ensure that their subsequent electronic data submissions were legally binding.

While some sites may find this type of registration process cumbersome, they may be encouraged given that they could also use this approach for other forms of electronic data interchange with EPA in the future.

## *Web Download*

### *References Scenario 2*

Another option would allow for the RCRA Sites to go online to a RCRAInfo (or Implementer's system) web site and download their site identification data (e.g., in XML format). This dataset would be imported into their software packages and allow them to update it directly prior to submission back to the agency. The format in which it is returned may be similar to the format each Implementer is currently using for electronic Hazardous Waste Report data submissions. Alternatively, the approach described below for 'electronic receipt' may be employed.

## *Electronic Receipt*

### *References Scenario 1-4*

This functionality is mainly geared for the individual sites with their communication between the States and/or the EPA. Upon logging in to the CDX, the data can be uploaded in the format of an eXtensible Markup Language (XML) document. This is a very common approach to data transactions over the Internet. The login information and verification process with TPAs is going to be the same as it is for the, above-mentioned, Web Online update. This would allow sites to electronically send their RCRA Site Identification Verification information to the EPA via CDX. As with the Web Data Entry functionality, this would require the need for authentication and verification from each site.

# Appendix: Results of Outreach to Implementers and Regulated Community

## *Site Verification Outreach – Industry Respondents*

Outreach was performed with industry representatives to gain their feedback regarding the proposal to perform a voluntary Site Verification process. This was accomplished by targeting two audiences.

A few RCRA Sites were identified and interviewed. These RCRA Sites were representative of both the larger and smaller generators, both those that had participated in a verification process in the past, and those that had not.

A selection of Trade Associations was targeted, of which four responded representing chemical manufacturers, electroplaters, service stations, and automobile dealers. The associations selected were chosen because they represent the majority of companies that would be most significantly impacted by this proposal.

A summary of the responses to pertinent questions is included below.

### *Do you feel that [you / your members] would gain any benefits by ensuring that the government accurately maintains identification data about their site? If so, what benefits would be most significant?*

Generally, the respondents did not consider site verification as a great benefit to the RCRA Sites. Although there is some advantages these appear to only apply to a sub-set of all RCRA Sites. For example, sites that have reduced / eliminated their regulated activity would benefit because other companies (e.g., insurance companies) would not be wrongly biased against them due to their prior regulated activities appearing to be ongoing.

### *Do you anticipate that [you/ your members] would respond to such requests from an environmental agency if their response were entirely optional?*

Although a half of the trade associations believed their members would not respond, the others, including most of the RCRA Sites said that they probably would.

### *Which of the following approaches do you think would be most successful?*

- *Receive form, fill out, sign and send*

- *Receive request, go to web, fill out, print and send*

- *Receive request, go to web, fill out, submit with 'electronic signature'*

Multiple options seem to be the consensus, with paper being the default and most commonly acceptable.

### Would you support or discourage a federal regulatory requirement for this verification process?

No trade association would support this. Although a few did identify some benefits for their members, it is hard to know whether they would discourage a federal regulation because they do not feel that the benefits are great enough, or because a voluntary approach was presented as an alternative. Regardless, it is likely that the majority of associations would not support a regulation.

## *Site Verification Outreach – RCRA Implementers*

Responses were received from a combination of Regions and States that together represented 39 out of the 54 States and Territories included within the survey distribution. The results from this outreach are described within the two sections below. The first section provides a summarization of the responses for those questions that required relatively specific answers. The subsequent section provides the full text of responses received for the more open questions posed within the survey and the general comments received.

*Have you already attempted any form of verification process, and if so of which type?*

> *A. Pre-printed paper forms*
>
> *B. State regulatory requirement to re-notify if information has changed*
>
> *C. Provide software and a personalized data set for electronic response*
>
> *D. Other – please specify below.*

Approximately one third of respondents do not perform any exercise similar to A, B or C above, but solely rely on inspections, biennial reports and voluntary re-notifications. Of the remainder that do perform some type of similar exercise, they are generally split between those that have a regulation in place, and those that use pre-populated forms. A few of the latter actually use blank forms, but with the same intent. Many of these practices do not include the full universe identified as part of the recommendation.

*Currently, the nation's RCRAInfo Site Identification data is on average 9 years old – what do you feel is an adequate average age for this type of data?*

The average response was approximately 2.5 years. The most common response was 2 years old.

*Is there some site identification data that you feel is in greater need of update than the rest, either due to importance or volatility? If so, indicate which data is most important to keep up to date.*

Of the 35 respondents to this question, the following were identified as being of greater need than the rest:

| | |
|---|---|
| Site Name | 60% |
| Site Location | 40% |
| Site Contact | 40% |
| Mailing Address | 54% |
| Owner / Operator names | 49% |
| Regulated Activity | 89% |

*Which approach(es) would be your preference and why?*

> A. *Pre-populated forms printed, mailed out and returned by post*
>
> B. *Web based pre-populated forms printed out by the reporter from the Internet and returned by post*
>
> C. *Web based pre-populated forms edited by the reporter and submitted electronically via the web*

The majority indicated that A was the most preferred, some stated B was preferred, and a few identified C as preferred. In general many respondents pointed out that multiple options would be ideal, both due to the different capabilities of RCRA Sites, as well as the foreseen continuing acceptance of web based mechanisms in the future. Some respondents preferred their current approach, which was typically either via inspections, or via blank forms.

*How much time (on average / per Site) do you anticipate it would take for you to process the verification of this information?*

Of the 29 respondents the average response was 30 minutes per RCRA Site. Many pointed out that the time was highly dependent upon the process used, however, the estimates were generally based on using pre-populated forms, or a state regulation to re-notify.

*Would you anticipate an overall increase or decrease in cost to your agency based on implementing this initiative?*

Of the 24 respondents, 17 anticipate an overall increase, 4 a decrease, and 3 no impact. Those that anticipated a decrease were typically currently performing a similar exercise, and either felt that having better data was already beginning to pay off, or an expansion of the universe they already verify would be easy to accommodate and still not outweigh the advantages.

*If you anticipate that implementing verification would require an increase in resources required to implement the program, how would you anticipate funding the additional resources required?*

Of the 22 respondents, 12 anticipated that they would have to attempt to use current funding or increase their State fees, and 10 anticipated that additional federal funding was the only way they could support the burden involved.

*This is an optional requirement, which may eventually become a regulatory requirement. Do you anticipate implementing this process while it is optional?*

Of the 18 respondents that expressed a clear intention, 11 indicated that they do anticipate implementing it, and 7 indicated that they would not. Of the former, a few indicated that this would be dependent upon federal funding.

*If intend to implement this process, how frequently would you anticipate verifying identification data for the following types of RCRA Sites?*

The average responses were:

TSDs:               every 1.57 years

LQGs:               every 1.73 years

SQGs:               every 2.39 years

Transporters:       every 2.4 years

***Would you anticipate being able to implement a re    gulation that would require RCRA Sites to verify their data periodically?***

The responses were fairly evenly split here, although a number of respondents that indicated that they could implement a regulation, took the question to mean 'adopt a federal rule', not develop an independent State regulation as was intended.

***Is there any regulatory restriction in your State for performing this type of exercise on an optional basis?***

With only a couple of exceptions, all respondents stated that there was no such restriction. The restrictions identified were due to policy and not regulatory restrictions.

# Appendix: Case Studies of State Verification Processes

During the middle of 2000, interviews were conducted with the States of Indiana, Kansas, Michigan, Minnesota and Oregon to understand current verification mechanisms. The table on the following pages summarizes the findings from these interviews.

| 1 | Which universe(s) of RCRA Sites is targeted for verification? How many RCRA Sites are involved and how frequently is verification performed? | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | TSDFs annually (~60 sites) LQGs annually (~600 sites) SQGs every 5 years with two iterations to date (~5000 sites) | TSDFs as changes occur (60 sites) LQGs as changes occur (250 sites) Kansas SQGs as changes occur (4000 sites) | TSDFs ongoing through inspections (240 sites) LQGs one-time April 1999 (2438 sites) SQGs planned (~6500 sites estimated by inspectors, ~9500 listed in RCRIS) | TSDFs ongoing through inspections (30 sites)<br><br>LQGs (180 sites), SQGs (700 sites), MN very SQGs (3700 sites) annually as part of licensing process. | TSDFs ongoing through permits and inspections. Also annually as generators (4 sites) LQGs annually (245 sites) SQGs annually (543 sites) CESQGs annually (2888 sites) Used Oil annually (8 sites) UW Collection annually (3 sites) UW Destination annually (1 site) |
| 2 | Please describe the mechanism used to conduct the verification process. For example, use of blank notification-style forms, pre-populated forms, online form availability, or online data submission. | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | A two-page form is pre-printed by the State system and mailed to RCRA Sites with spaces provided for corrections. The RCRA Site completes and returns the form.<br><br>NOTE: Changes to ownership or location must be supported by the submission of an 8700-12 form with an official signature. | Updated State Notification forms are required when changes occur.<br><br>Kansas additionally sends quarterly newsletters to all LQGs and Kansas SQGs. Returned mailings are followed up providing better information. | Pre-populated forms are printed from the handler data in RCRIS. The RCRA Site completes and returns the form. | Pre-printed forms are sent to all generators annually requesting verification of generator status for that year. Form includes known basic RCRA Site information and summary waste reporting information from previous report. Generator must provide data on waste production by RCRA waste code and may correct other information on the form before returning to the State. Reported information is used to assess a fee on the generator | Pre-populated Registration Verification Report (RVR) produced from State information system and mailed to the sites. For TSDFs, LQGs and SQGs the RVR is sent with the annual waste reporting forms. |

| 3 | What set of information is verified?  For example, all information included on the notification form or just a subset? | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Name<br>Location address<br>Mailing address<br>Owner<br>Contact<br>SIC codes<br>Activity information | Name<br>Location address<br>Mailing address<br>Owner<br>Contact<br>Land type<br>Activity information<br>Waste codes | Name<br>Location address<br>Contact<br>Generator status | Name<br>Location address<br>Contact<br>Generator status<br>Waste production information by waste code. | Name<br>Location address<br>Mailing address<br>Site phone number<br>Contacts (various)<br>SIC code<br>Employee count<br>Site owner<br>Land owner<br>Generator status |
| 4 | What is the primary purpose of the verification process?  For example, to improve data quality, to support invoicing. | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | To improve data quality resulting in better response to invoicing procedures and to support inspection procedures. | Improve data quality for program management purposes.<br><br>An important use is to ensure correct delivery of an annual fee report to LQGs and Kansas SQGs who must report total waste generated and pay a fee based on this generation quantity. | Verification of LQGs was undertaken (1) to obtain an accurate set of information about LQGs to support distribution of the 1999 Biennial Report, and (2) to support the introduction of a fee program proposed for 2002. | To support revenue generation from invoices. | Improve data quality for various program management purposes, including inspection planning and scheduling, rulemaking, technical assistance and supporting annual waste reporting and invoicing procedures. |

| 5 | Are the RCRA Sites required by rule or statute to respond, or is response voluntary? | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Not required by rule, currently optional[10]. | Required by rule. | Response is voluntary and the State must clearly indicate this on the form[11]. | Required by State rule. | Required by rule (OAR 340-102-0012) since 1991. |
| 6 | What level of response does your State typically experience from each universe? | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | TSDFs ~ 90%<br>LQGs ~ 90%<br>SQGs ~ 80%<br><br>For TSDFs and LQGs the verification report typically accompanies the annual invoice and since this requires a response, it likely encourages a response to the verification form. | TSDFs – high<br>LQGs – medium<br>Kansas SQGs - low | LQGs 65% immediately, 97% after follow up phone calls. | TSDFs 100%<br>LQGs 100%<br>SQGs 100%<br>MN very SQGs  100% | 84% of all RCRA Sites immediately, 98.5% after follow up actions.  Eventually will track and probably close the 1.5% outstanding RCRA Sites. |

---

[10] Indiana is currently considering a change to the State regulations to discontinue the collection of manifests by IDEM.  This change will be accompanied by a new requirement for all LQG and SQG RCRA Sites to submit an annual waste summary report detailing the information currently collected by the manifest.  For LQGs, the reporting requirement will be met by the Biennial Report submission every other year.

This change will effectively result in the mandatory annual verification of basic site information although some data elements, in general, those not found currently on the Uniform Hazardous Waste Manifest will be optional.

[11] Michigan has only performed verification once so far although the State has plans to introduce a fee program that would require annual verification from both LQGs and SQGs in association with fee collection.  It has been estimated that implementation of this program will require 4 FTEs.  The program will be self-funding in that 20% of revenues will be used to run the program.

The mandatory information collected under the fee program will be minimal although additional optional data elements may also be collected as part of the process and the mandatory set is likely to be broader than the set of information currently collected from LQGs.

| 7 | As far as you can determine, what proportion of responses include changes to the basic site information? | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Approximately 80% of the responses include some change to the notification information.<br><br>Approximately 30% of these changes involve ownership or location information and are regarded as significant. | No metrics recorded. ~5 Notifications are received per day. | Approximately 81% of responses included changes to the notification information.<br><br>47% identified changes to RCRA Site name, location, contact.<br><br>34% of responses included changes to the generator status. | | ~16% of responses include a change in ownership or generator status and are regarded as significant<br><br>~5% include a change to mailing address information. |
| 8 | If you have performed a verification process more than once for the same universe, please compare the effort required for the initial verification to that required for the subsequent processes | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | No metrics are available.<br><br>For TSDFs and LQGs there was probably little difference since the sites report biennially and are inspected every three years or so.<br><br>For SQGs the number of changes recorded was probably greater | Wholesale verification not performed. | Only performed one-time. | | No specific metrics are available.<br><br>The process is continually being improved and streamlined to reduce costs. |

| 9 | Please provide an estimate of the State resources required to support this verification process. For example, how much staff time is required to produce the verification documentation, follow up with non-responsive sites and record any changes reported? | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | The pre-printed forms are prepared automatically and little follow up is done with non-responsive sites. The major effort involved is in recording the submitted changes. For the LQG universe this amounts to ~10-20% of 1 FTE per year (400 hours). For the SQG universe to ~50% of 1 FTE (1000 hours). | 1 FTE per year processing notifications (2000 hours) 1 FTE per year conducting follow-up and troubleshooting (2000 hours). | 14 person months were required to verify LQGs including producing and mailing the verification report, following up non-responsive sites and applying changes to RCRIS. It has been estimated that the same exercise for SQGs will likely require 40 to 50 person month effort. It is estimated that some 10,000 additional sites (CESQGs, used oil handlers, etc) could not be verified in any reasonable timeframe. | 4 person months data entry effort for changes. | Approximately 1.3 FTE per year (2700 hours) is committed to mailing of RVRs and follow up. Approximately 0.7 FTE per year (1300 hours) per year is committed to processing changes into the State information system. |
| 10 | If available, please provide estimates of the time required for a "typical" handler to complete the verification form. | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Minutes | ~10 minutes | ~10 minutes | | ~15 minutes |
| 11 | How are non-responsive RCRA Sites handled? For example, are follow-up visits conducted? | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Since the program is optional, no follow-up is conducted. | Site visits or mailings. | Phone calls | Phone calls and rarely a site visit. | Two consecutive letters are mailed to RCRA Sites that don't report by the due date. LQGs and SQGs are then targeted for inspections. Failure to report is recorded as a violation. CEGs are targeted for technical assistance visits. |

| 12 | Do you have any measures of the effectiveness of the approach you use in terms of the resulting improvements in data quality? For example, a reduction in the number of unnecessary site visits. | | | | |
|---|---|---|---|---|---|
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Assume that improved data quality has reduced wasted costs. | No metrics. Estimated that up to 100 inspections per year are aborted due to incorrect location information about the target site. | Improved data quality ensured correct mailings for the Biennial Report and confirmed information to support inspections. | | No specific metrics recorded, however, it is clear that the process reduces wasted mailing costs and the number of unnecessary site visits. |
| 13 | What feedback have you received from the regulated community about the verification procedure you use? | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | Questions about completion of the forms. | No complaints. | None. | | Viewed favorably by the regulated community. |
| 14 | How is your RCRA program information managed? If a state-specific system, how does the verified information get provided to the national RCRIS system? | | | | |
| | *Indiana* | *Kansas* | *Michigan* | *Minnesota* | *Oregon* |
| | State-specific system.

Also provide data to RCRIS by direct input. | RCRIS by direct input. | RCRIS is used currently by direct input.

State is currently in the process of developing an integrated State system to meet RCRA information management needs. | Have a State-specific database.

Also provide data to RCRIS. | State-specific system.

Also provide data to RCRIS by translation. |

# Appendix: Example Site Verification Form

An example of a Site Verification form is attached below. This is directly based on the recently finalized Site Identification form, and has been modified to include two subsections for each relevant question on the form. One subsection presents the most recent information known by the Implementer, and the other section is blank to allow the respondent to note any changes they may have to that information.

If you would like to see more information about the new Site Identification form, please review the information that is available at the following web site:

**www.epa.gov/epaoswer/hazwaste/data/brs01/forms.htm**

Note that the example form below is only intended to provide the reader with some insight into the way this form may be used, and should not be considered a proposed format. Please do not provide comments about the format presented.

For the fields in sections 10a and 10b that have the check boxes with an arrow separating the two are defined as follows: the first box corresponds to the old box with an arrow to the new box (i.e., old box ❑→❑ new box).

It is recommended that the instruction booklet (or on-line instructions) that accompanies this form should be shortened to just include directions for each 'box'. The general regulatory explanations and appendices should be separated.

| MAIL THE COMPLETED FORM TO: The Appropriate EPA Regional or State Office. | United States Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION VERIFICATION FORM** | |
|---|---|---|
| **1. Reason for Submittal and Status of Information Supplied (see instructions on pages 10 and 11)** | **A. Reason for Submittal**: ❑ To provide subsequent notification (to update site identification information). ❑ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____). ☒ As a component of the Hazardous Waste Report. | |
| **2. Site EPA ID Number (see instructions on page 11)** | **EPA ID Number: ABD910848737** | |
| **3. Site Name (see instructions on page 11)** | **Legal Name: Refrigerator, Inc.** | |
| **Site Name Revised** | **Legal Name: *Cold Stoves, Inc*** | |
| **4. Site Location Information (see instructions on page 11)** | **Street Address: 200 N. Washington Street** | |
| | **City, Town, or Village: RCRA City** | **State: AB** |
| | **County Name: RCRA County** | **Zip Code: 88899** |
| **Site Location Information Revised** | **Street Address:** | |
| | **City, Town, or Village:** | **State:** |
| | **County Name:** | **Zip Code:** |
| **5. Site Land Type** | **Site Land Type:** ❑ Private ❑ County ❑ District ❑ Federal ❑ Indian ❑ Municipal ❑ State ❑ Other | |
| **Site Land Type Revised** | **Site Land Type:** ❑ Private ❑ County ☒ District ❑ Federal ❑ Indian ❑ Municipal ❑ State ❑ Other | |
| **6. North American Industry Classification System Code(s) for the Site** | A. **335222** | B. **332813** |
| | C. **332999** | D. |

| 6. North American Industry Classification System (NAICS) Code(s) Revised | A. *335222* | | B. | |
|---|---|---|---|---|
| | C. | | D. | |

| 7. Site Mailing Address (see instructions on page 12) | Street or P. O. Box: **200 N. Washington Street** | |
|---|---|---|
| | City, Town, or Village: **RCRA City** | |
| | State: **AB** | |
| | Country: | Zip Code: **88899** |

| Site Mailing Address Revised | Street or P. O. Box: *200 N Washington Street , Suite 160* | |
|---|---|---|
| | City, Town, or Village: | |
| | State: | |
| | Country: | Zip Code: |

| 8. Site Contact Person (see instructions on page 12) | First Name: **John** | MI: **R.** | Last Name: **Smith** |
|---|---|---|---|
| | Phone Number: **(999) 684-8000** | | Phone Number Extension: **410** |

| Site Contact Person (see instructions on page 12) | First Name: | MI: | Last Name: |
|---|---|---|---|
| | Phone Number: *(999) 684-8130* | | Phone Number Extension: |

| 9. Legal Owner and Operator of the Site (see instructions on page 12 and 13) | A. Name of Site's Owner: **Scott Black** | Date Became Owner(mm/dd/yyyy): **01/10/1996** |
|---|---|---|
| | Owner Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other | |
| | B. Name of Site's Operator: | Date Became Operator(mm/dd/yyyy): |
| | Operator Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other | |

| Legal Owner and Operator of the Site (see instructions on page 12 and 13) | A. Name of Site's Owner: : *Marge White* | Date Became Owner (mm/dd/yyyy): *11/15/2000* |
|---|---|---|
| | Owner Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other | |
| | B. Name of Site's Operator: | Date Became Operator (mm/dd/yyyy): |
| | Operator Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other | |

**10. Type of Regulated Waste Activity** (Mark 'X' in the appropriate boxes. See instructions on pages 13, 14, 15, and 16)

**A. Hazardous Waste Activities**

**1. Generator of Hazardous Waste**

(choose only one of the following three categories)

☐→☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste; or

☐→☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs.) of non-acute hazardous waste; or

☐→☐ c. CESQG: Less than 100 kg/mo of non-acute hazardous waste

**In addition, indicate other generator activities (check all that apply)**

☐→☐ d. United States Importer of Hazardous Waste

☐→☐ e. Mixed Waste (hazardous and radioactive) Generator

**For Items 2 through 6, check all that apply:**

☒→☐ **2. Transporter of Hazardous Waste**

☐→☐ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

☐→☒ **4. Recycler of Hazardous Waste (at your site)** Note: A hazardous waste permit may be required for this activity.

**5. Exempt Boiler and/or Industrial Furnace**

☐→☐ a. Small Quantity On-site Burner Exemption

☐→☐ b. Smelting, Melting, Refining Furnace Exemption

☐→☒ **6. Underground Injection Control**

**B. Universal Waste Activities**

**1. Large Quantity Handler of Universal Waste** [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. (check all boxes that apply):

| | Generated | Accumulated |
|---|---|---|
| a. Batteries | ☐→☐ | ☐→☐ |
| b. Pesticides | ☐→☐ | ☐→☐ |
| c. Thermostats | ☐→☐ | ☐→☐ |
| d. Lamps | ☐→☐ | ☐→☐ |
| e. Other (specify) _____ | ☐→☐ | ☐→☐ |
| f. Other (specify) _____ | ☐→☐ | ☐→☐ |
| g. Other (specify) _____ | ☐→☐ | ☐→☐ |

☐→☐ **2. Destination Facility for Universal Waste**

Note: A hazardous waste permit may be required for this activity.

**C. Used Oil Activities**

**1. Used Oil Transporter - Indicate Type(s) of Activity(ies)**

☐→☐ a. Transporter

☐→☐ b. Transfer Facility

**2. Used Oil Processor and/or Re-refiner - Indicate Type(s) of Activity(ies)**

☐→☐ a. Processor

☐→☐ b. Re-refiner

☐→☐ **3. Off-Specification Used Oil Burner**

**4. Used Oil Fuel Marketer - Indicate Type(s) of Activity(ies)**

☐→☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner

☐→☐ b. Marketer Who First Claims the Used Oil Meets the Specifications